AUG. 8 1958

PETROLEUM WEEK

A McGRAW-HILL PUBLICATION

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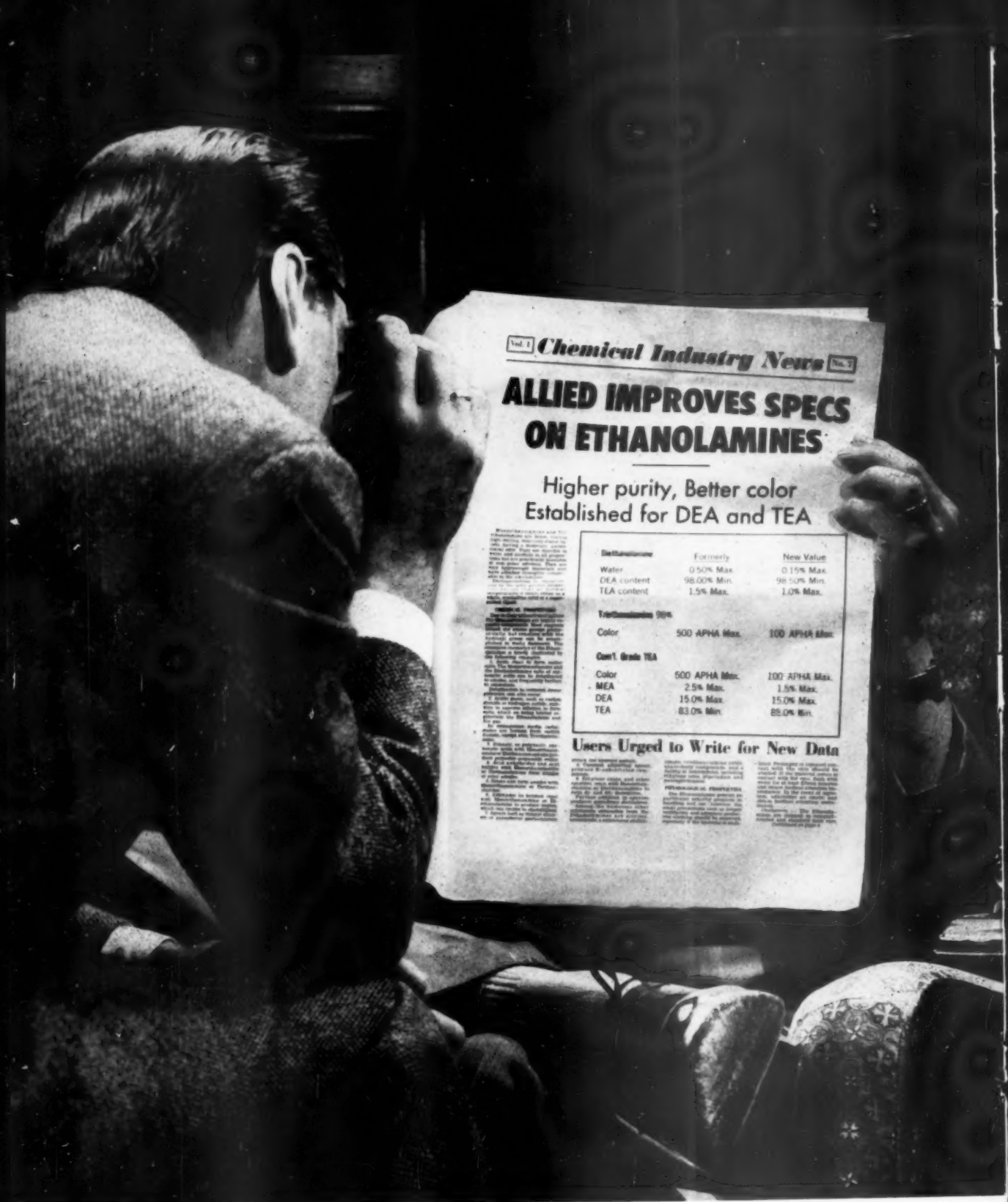

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by W. M. FLOWERS
President
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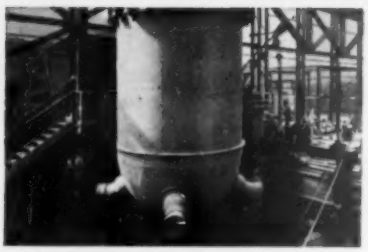

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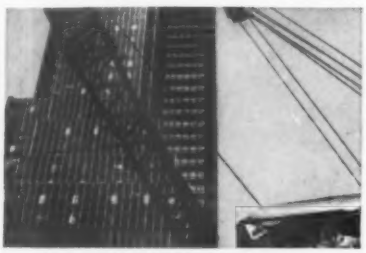
The trend is to labor-saving, ready-to-eat packaged foods. This new phase of an old industry will need thousands more workers.



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3 million workers will benefit from new highway and construction programs—and even more workers will be needed soon.

7 BIG REASONS FOR CONFIDENCE IN AMERICA'S FUTURE

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* * *

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Good Wells Make Good News

A Special Report on Successful Cementing Jobs

August 8, 1958

CEALMENT* is a Dowell-developed cementing service that uses special latex-cement. This latex-cement has low fluid loss and good sealing characteristics. When set, it has demonstrated excellent resistance to shattering. These properties make possible results like those reported here.

- **Southern Saskatchewan, Canada.** A well in the South Alida Beds pool of the Nottingham field was making only 50 bopd and 50 bwpd. The formation—of the Mission Canyon series—was squeezed with 400 gallons of Dowell latex-cement. Final squeeze pressure was 2000 psi. *After re-perforating, well tested at a capacity rate of 300 bopd with negligible water. Six months later, capacity of well was unchanged; water production was negligible. Potential still exceeded production.*

- **Midland County, West Texas.** This well was to be completed with pay zones in Devonian and the Strawn. Since both zones might need stimulation, separation was necessary. A 5½-inch liner was set from 9963 to 11,545 feet using 2000 gallons Dowell latex-cement. *As a result, communication between zones was prevented.*

- **Baton Rouge Parish, Louisiana.** This well had a hole in the casing at 6940 feet, which was above the primary cement job. Cealment was selected to repair the hole. 800 gallons of latex-cement was squeezed using a pressure of only 100 psi. *After the remaining latex-cement was drilled out, casing held 1500 psi test pressure.*

- **Marion County, East Texas.** A well was completed through perforations into the Henderson sandstone from 6039 to 6044 feet. It was acidized but channelled to water. To repair the channel, Dowell used Cealment with 500 gallons of latex-cement. After squeezing, drilling out and re-perforating, well swabbed 36 bopd but would not flow. Dowell cleaned the formation with 500 gallons of lease oil containing two per cent Mudlax.* *After treatment, well flowed 72 bopd by heads, with no water. All three treatments paid out in less than 10 days of producing time.*

For detailed information on Cealment, or prompt service, call any of the 165 Dowell service points. In Canada, call Dowell of Canada, Ltd.; in Venezuela, contact United Oilwell Service. Or write Dowell, Tulsa 1, Oklahoma.

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60-Second Summary / WHAT'S HAPPENING IN OIL

AT-A-GLANCE PETROLEUM WEEK Copyright

August 8, 1958

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Maybe oil men should talk more to people who haven't made up their minds about the industry. The Canadian Petroleum Assn. suggests this, after noting how many "don't know" and "no opinion" replies it got during a public opinion poll. . . . p. 12

•

It's safer for an oil-short nation to deal with a company rather than directly with a producing country. The reason: International firms have multiple sources of crude. Therefore, a supply from them is less subject to disruption. . . . p. 19

•

Oil firm budget trimmers got a setback this week when steel prices went up. The increases range from $6 a ton (for line pipe) to $7 a ton (for casing) and $10 a ton (for drill pipe). Other items are advancing accordingly. . . . p. 9

•

Some hot debate is brewing in Oklahoma. The Corporation Commission has proposed rule changes that are sure to draw pro and con arguments at an upcoming hearing on the proposals. For instance, one change would authorize the commission to order a pipeline connection and to specify the terms. . . . p. 12

•

Sweden is ahead of the U.S. in shale oil development. The Swedes have had commercial shale oil production since 1942, and are now testing underground electric heaters to vaporize oil shale hydrocarbons. . . . p.31

•

Deeper drilling has tripled production from an old California offshore lease. Production jumped from 500 b/d to 1,800 b/d in a year's time from General Petroleum Corp.'s 28-year-old Ferguson lease, Rincon field, Ventura County. . . . p. 20

•

Air drilling also paid off in a California workover program. Monterey Oil Co. has almost tripled production from five wells in the Edison field, Kern County, using air drilling and an air-chemical wash technique. . . . p. 24

•

A pipeline plan in France is gaining momentum. Nineteen oil firms are behind a move to build a big-inch crude line from the Mediterranean to the upper Rhine. . . . p. 16

•

Oil firms are wasting no time in dickering with the Morocco government for oil rights. The door was opened by the new 50-50 oil law . . . p. 40

•

Israel is trying to rekindle interest in a pipeline to link the Mediterranean and the Gulf of Aqaba. The Israelis pose this as an alternate to the Suez Canal route. . . . p. 40

Up to the Minute / SIGNIFICANT LATE NEWS

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August 8, 1958

Note Jersey Standard's growing interest in the Sahara. It is joining six French oil firms in a new company to build a 40,000 b/d refinery near Algiers "as soon as possible" to process Sahara crude.

•

Watch for a step-up in electric logging activities by Dresser Industries. Lane Wells Co., one of the Dresser Industries, announced this week that it had acquired Elgen Corp., of Dallas. Elgen specializes in electric logging.

•

The military made a hurried effort this week to charter tankers to be used as storage vessels in the Mediterranean. When the Mideast flareup occurred, the military did some quick and heavy buying of oil products for possible use in that region. Now, with the products on the way, the military needs a place to put them. To get the vessels, it issued a call for "prompt" time charters of from one to three months, for operating tankers or for hulls.

•

The government is trying to decide what to do about six alleged violators of imports quotas. But the Interior Dept. notes that three of them were in compliance during June, even though they were in excess for the full April-June quarter. The three "noncompliers" in June exceeded their quotas by a total of 22,500 b/d.

Meanwhile, 14 "established" importers and 62 other companies have applied for new crude imports allocations totaling an additional 601,764 b/d.

•

You can expect Canada to approve natural gas exports to the U. S. The Borden Commission has already reached a tentative agreement to recommend such a step when it makes its interim report this fall. The commission apparently was impressed by a presentation last February by British American Oil Co., Ltd., in which the firm proposed a formula whereby Canada would be assured of an adequate supply, and an ample amount would be left for export. Without outside markets, the company warned, there would not be enough incentive for continued gas exploration and development. Top Alberta government officials are backing this view.

•

Rumania has offered Argentina $40-million worth of oil equipment, reportedly including 40 drilling rigs, installation of a plant to manufacture oil machinery, and some refining equipment. This follows the Soviet Union's recent $100-million barter proposal (PW—Aug.1'58,p70). Argentina is studying both proposals, which may include long-range trade agreements.

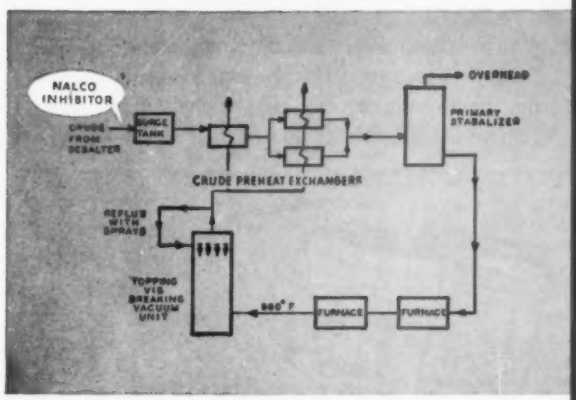
•

Paul Kayser is the new president of Pacific Northwest Pipeline Corp. He succeeds Stuart Silloway, who resigned to head an investment firm.

Nalco INHIBITORS STOP CORROSION and FOULING

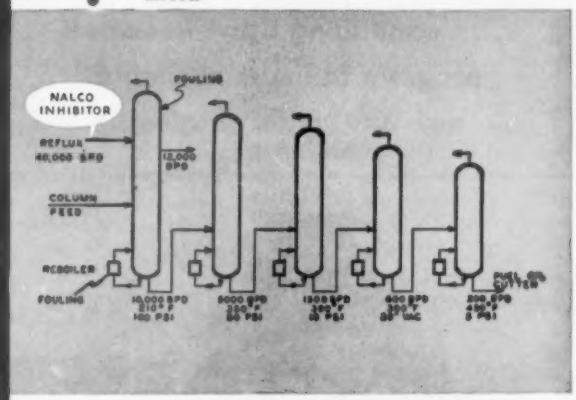
Every Step of the Way

HERE are four typical stages of refinery production where Nalco Inhibitors stop corrosion and fouling. There are many others, too. In fact Nalco Inhibitors are effective every step of the refinery way. Ask your Nalco Representative or write direct.



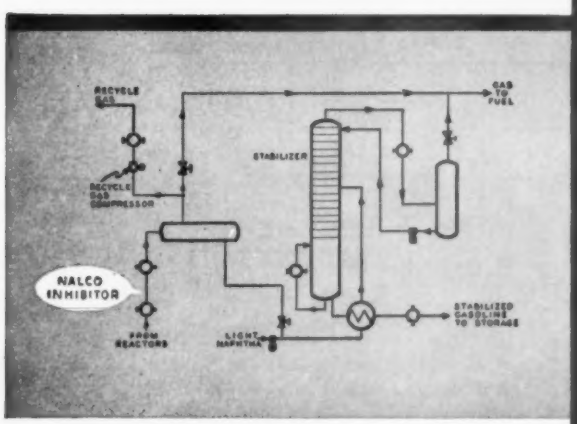
CRUDE PREHEAT EXCHANGERS

The Problem: Fouling. *The Treatment:* 15 ppm of Nalco Inhibitor. *The Results:* Normal temperatures regained in exchangers after five weeks of treatment. Actual reduction of 4 days of downtime due to cleaner condition of treated units.



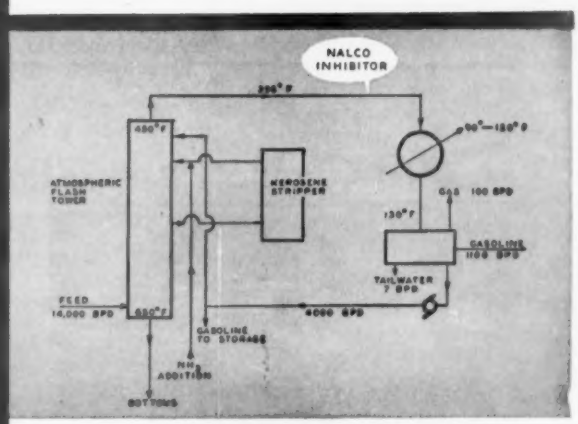
ALKYLATION SYSTEM

The Problem: Reboiler fouling. *The Treatment:* Nalco Inhibitor fed to reflux of left tower. *The Results:* No water washing or mechanical cleaning of system needed after full year of operation. Refinery costs and inconvenience reduced considerably. Greater production realized.



PLATINUM REFORMING UNIT

The Problem: Severe corrosion of exchangers and accumulator after the reactors due to an unusually high halogen acid contamination which held pH about 1.3. *The Treatment:* Nalco Inhibitor into reactor effluent. *The Results:* Iron content reduced from 13.9 to low of 0.73 lbs. per day, far lower than with other inhibitors at greater dosage.



DELAYED COKING UNIT

The Problem: Corrosion of overhead condenser, accumulator and stream pumps. Small amounts of iron sulfide "scaling" in flash tower. *The Treatment:* Nalco Inhibitor added to overhead stream. *The Results:* Iron content of tail water reduced from 300-1000 ppm to approximately 1-20 ppm. Corrosion and scaling stopped.

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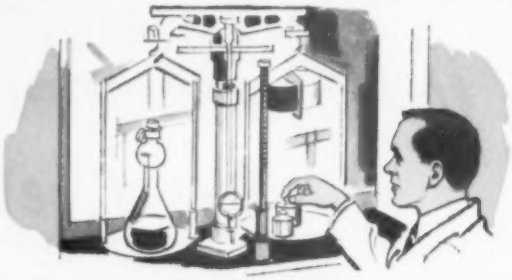
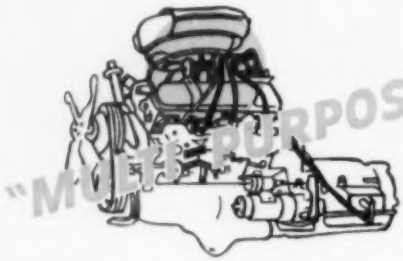
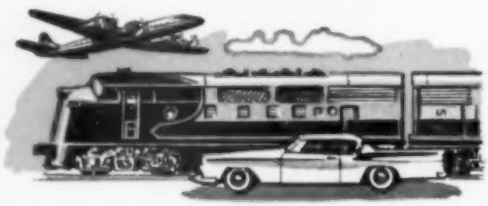


1. As a natural outgrowth of its leadership in the field of antiknocks, Ethyl's expansion with the petroleum industry has led to increasing attention to other types of additives.



2. Just announced, for example, is "Ethyl" Multi-Purpose Additive for gasolines—a single additive for carburetor cleanliness, ice inhibiting and corrosion control.

3. To improve stability—of gasolines, oils and jet fuels—Ethyl has done significant work with its Ortho-Alkylation process and has several new additives in various stages of development.



4. Ethyl's phosphorus compounds for gasolines and cetane number improver for diesel fuels are well known—and our new gasoline dyes offer significant advantages at no increase in cost.

5. And as you would expect, these Ethyl products are distinguished in still another way: they are backed by the kind of service that has built Ethyl's industry-wide reputation.

Ethyl Research in the development and improvement of additives is carried on as a service to the oil industry, typifying Ethyl's belief that service is just as important as product.

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Oil Groans Over Steel Price Hike

The steel price increases—averaging around 3%—hit the oil industry at a bad time. But there doesn't seem to be much the industry can do about it.

From the oil industry's viewpoint, the timing of the hikes couldn't have been much worse. Texas producers, for instance, have been operating on extremely tight allowables, with an upturn just beginning. And refiners have been holding down runs in an effort to reduce product stocks.

All in all, the industry has been operating with a tight belt thus far this year, with signs of improvement just beginning to emerge.

First-half financial reports currently being made by oil firms demonstrate that virtually all of them had a substantial dip in profits in the first six months. This profit decline was created by costs increasing more rapidly than revenues.

The Texas Independent Producers & Royalty Owners Assn. was quick to complain about the steel price hike.

"The American Independent oil producer is in no position to absorb another increase in the cost of his steel goods and it is unfair that he should be asked to do so," TIPRO said.

Eugene M. Locke, TIPRO president, who issued the statement, put the argument this way:

"With our production held very near record low levels in order to make room for excessive foreign oil, our unit operating costs are at an all-time high. Our available revenue for exploration and drilling is inadequate at best.

"In the past, we have tried to absorb steel price hikes, with the result that when crude prices are raised enough to compensate for accumulated cost increases, the public fails to see the direct relationship."

Producers hope that crude prices will firm up enough to offset the higher steel costs.

On this point, Locke said that much of the crude price increase made in January, 1957, has been lost by subsequent lower postings.

"Certainly it is only fair to expect increases adequate to offset the effects of any new increase in the price of steel," he said.

"We have no course but to ask the crude oil purchasing companies to recognize the importance of equitable crude prices to a healthy U. S. oil producing industry."

Most observers feel, however, that any general rise in crude prices at this time is unlikely—though area adjustments may begin to reflect to some extent the burden of higher steel costs.

In many cases, the steel price hike caught oil firms with relatively low inventories of steel goods.

In order to bring operating costs down, many companies had been "living off inventories." Trading of oil country tubular goods was a common practice to enable a company to pare down high stocks of one item by trading for items of which he had a short supply.

There was a mild flurry of purchases of steel products before the hike went into effect, but apparently it was not on a major scale.

Some in the industry had hoped that the price hike might not materialize.

The hope ended last week when the steel increases began. At first, the hikes were limited to a few types of steel, but the increases quickly spread: By the middle of this week, most types of steel were covered, including those used widely by the oil industry.

When the hike in basic steel came, oil field supply houses generally felt there was nothing to do but pass it along to the consumer.

Prices of oil country tubular goods went up in a range of $7 to $10 a ton, with casing rising $7, tubing $8, and drill pipe $10. Line pipe prices rose $6 a ton.

By midweek, the price hikes were spreading to sucker rods, wire rope, and other steel products.

As one supply company in the Southwest put it: "There has never been a steel increase yet that wasn't passed along to the consumer."

Even so, the supply houses were reluctant. One said: "As suppliers of oilfield equipment, we are extremely aware of the need to keep costs down. No one is going to cut loose and see what they can get for steel products.

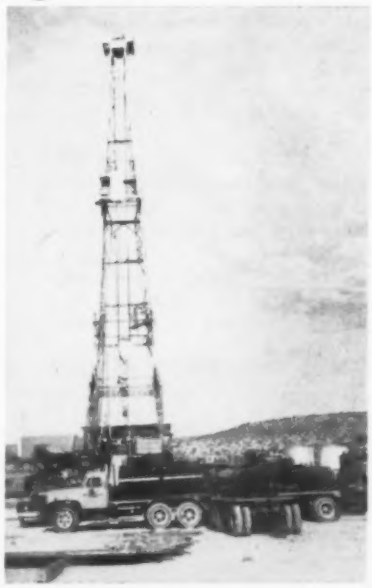
Record Acidizing Tests Start

The first of a series of the deepest acidizing jobs ever attempted was begun this week by Dowell. The scene: Phillips Petroleum Co.'s No. 1-A Harral, in Pecos County, Tex. (picture).

Despite the depth—perforations were at 18,950-19,000 ft.—little difficulty was encountered, even though the pressure was high and the rate of pumping slow.

The second of the series will be at the No. 1-A Montgomery, about 16 mi. from the No. 1-A Harral. Plans call for acidizing a 400-ft. open hole section in the Ellenburger from 23,000 to 23,400 ft.

A third and still deeper treatment is planned for the Phillips No. 1-EE University, 12 mi. northwest of the No. 1-A Harral.



Government Apt to Stand Pat on NPC

The Interior Dept. is optimistic that the National Petroleum Council will continue to cooperate wholeheartedly with the federal government—despite industry opposition to some of the proposed new rules governing council operations.

In a letter to NPC Chairman Walter Hallanan, Secretary of the Interior Fred Seaton suggested changes in council rules in order to avoid "antitrust or conflict of interest problems" (PW—Aug.1'58,p14).

Seaton wants government cochairmen for the council, its committees, and where feasible, its subcommittees. Meetings of the council and its committees would be at the call of the government cochairmen, and the agenda for such meetings would be formulated by the government.

NPC objects to several of the changes on grounds it must be able "to do an effective job" for the government and to "protect itself and its members."

In a letter to Seaton, NPC spokesman Hines Baker expressed the council's continuing hope that it "might operate in the future essentially as it has in the past . . . subject to a more formal conformance . . . to reasonable standards set forth by the Attorney General."

"We have proceeded on the assumption that the government desires impartial factual studies and analyses based on the independent judgment of highly competent and qualified members of the petroleum industry," said Baker.

This can be accomplished only by permitting those in the industry charged with the duty of making such studies and analyses to assume a full measure of responsibility in persuading competent committee members to serve, calling meetings and insisting on attendance and active work, securing access to complex technological, operating, and economic data, and preparing reports for government use."

Baker spelled out a number of objections:

- NPC feels that Seaton's plan for "equal rights and authority" would lead to confusion over just what the respective functions of the chairman and cochairman are. But the council doesn't quarrel with the government representative's right to close a meeting.
- NPC feels that the industry chairman should issue calls for meetings, subject to concurrence by the cochairman if the government insists this is necessary.

Instead, Seaton would have meeting of both the council and its committees "at the call of the cochairman."

- NPC doesn't think the government should draft the agenda for meetings.

"While it is recognized that the Secretary does and should initiate all agenda items," says Baker, "we are fearful that the government's language might be construed to override the powers of the agenda committee and the council to refuse to consider a matter as improper and inadvisable, in accordance" with NPC's articles of confederation.

Baker doesn't quarrel with the government's right to initiate agenda matter, but insists that it is "wholly impractical" for the government to formulate agenda for working committees.

NPC is also known to object to the new rule requiring comprehensive minutes of all committee meetings, on the ground that the nature of the work doesn't lend itself to description in minutes. Instead, the council suggests a record of action taken.

Government lawyers see only "a disagreement over words. There's no real quarrel over the intent of the new rules." Hence, they see no big hurdle to final promulgation of the new rules substantially as proposed by the government.

Oil Man's Album

A Boon to Education

The fabulous Santa Rita, the first well on University of Texas lands, started the big oil revenues for the school.

The well, in Reagan County, was drilled by Frank T. Pickrell and Haymon Krupp. It was named for the Saint of the Impossible—Santa Rita. It became a producer May 28, 1923.

(No. 16 in a Petroleum Week series)

New Crude Line Set For Alberta Field

Contracts have been let, with construction to start immediately, on a $6.5-million crude line from the Swan Hills oil field to Edmonton, Alberta.

The line will be about 130 mi. long and is scheduled to be completed by Nov. 1. The Swan Hills field is northwest of Edmonton.

Home Oil Co., Ltd., and McColl-Frontenac Oil Co., Ltd., are major backers of the line. These two also head a group of companies engaged in developing the Swan Hills oil field.

The line will make direct connection with both the Interprovincial and Trans Mountain pipelines at Edmonton.

"This will give the Swan Hills field access to both West Coast and eastern markets, in addition to Western Canada refineries," a company statement said.

Designed to serve the entire Swan Hills-Virginia Hills area, the line will have a maximum capacity of 50,000 b/d.

Initial input will be from seven wells now completed and awaiting market outlets. Operators expect the line to be moving 3,000 b/d by spring.

The Home-McColl team is speeding work to prepare well sites and access roads in the Swan Hills field for a 24-well development drilling program that will start immediately after the freezeup.

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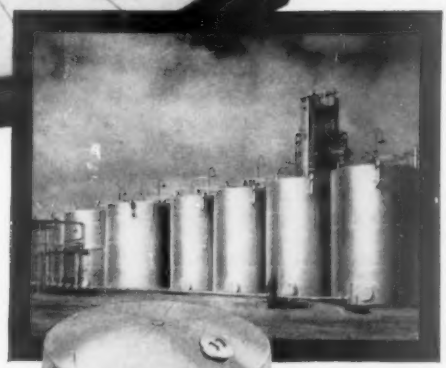

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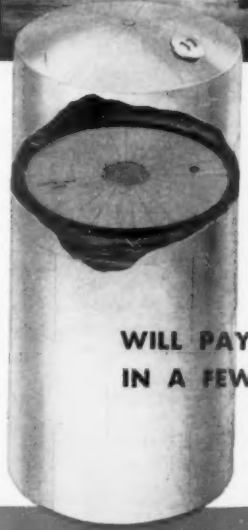

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Midwest Gas Supply Picture Changes

A plan to transport Rocky Mountain natural gas to Chicago is dead —and the result may be a big boost to Midwestern Gas Transmission Co.'s plans for serving the Upper Midwest area.

MGT, an affiliate of Tennessee Gas Transmission Co., has run into massive opposition from coal interests and other pipelines on its plan to serve the Upper Midwest area—including steel plants in the Chicago area—with gas from Canada and from the regular TGT system.

One of the early opponents was People's Natural Gas Co., which objected particularly to MGT's proposal for direct sales to steel plants.

People's withdrew its opposition when MGT expressed its willingness to sell the gas to utilities in the Chicago area for resale to the steel plants.

At any rate, Peoples was still depending on a supply of gas from the Rocky Mountains.

Natural Gas Pipeline Co. of America, an affiliate of Peoples, and Colorado Interstate Gas Co. have canceled the arrangement under which Colorado would supply the Peoples system with up to 350-million cu. ft. daily.

This means the effective collapse of a plan—still awaiting FPC approval—under which Peoples would build 415 miles of 36-inch loop pipeline from Beatrice, Neb., to Joliet, Ill.

The line would have connected at Beatrice with a new line to be built by Colorado Interstate, which planned to buy from Pacific Northwest Pipeline Corp. some 100-million cu. ft. daily of the gas destined for the Peoples system.

Eskil I. Bjork, Peoples board chairman, explains that the mutual agreement to cancel the arrangement arises from the obvious fact that the project can't be completed in 1959, if certificated. (Completion originally was planned for 1957, but was delayed by lengthy FPC hearings and the so-called Memphis case decision.) The companies had deferred the project in December, 1957, when the Memphis decision came out.

In an apparently related development, Colorado Interstate has agreed to sell gas to El Paso Natural Gas Co. (page 16).

Peoples can replace some of the gas from its own reserves, but is expected to look outside for a big chunk of it. Industry sources see Midwestern Gas Transmission Co. as an obvious source.

There is a feeling that Peoples wouldn't have agreed to cancellation of the contract with Colorado unless it had arranged for an alternate supply.

TGT spokesmen have no comment on the possibility of a deal to sell gas to the Peoples system through its affiliate, MGT.

An examiner's decision is expected in the Midwestern case within a few weeks, and a final FPC decision by the end of the year.

Oklahoma Plans 'Bold' Changes

The Oklahoma Corporation Commission is proposing major changes in its oil and gas conservation rules, including tighter controls over waterflood operations, authorization to set depth brackets, and authority to order crude pipeline connections.

The proposals, under study for more than a year, are contained in an 83-page rule book the commission made available to the industry this week.

A hearing has been scheduled tentatively for the week of Oct. 6, and heated arguments are expected.

A commission official terms the proposals "a very bold step, going well beyond what any other state has done in the conservation field."

The waterflood control proposal is being made on the grounds that abuses have arisen under the old system.

There have been charges that some wells are currently being called waterfloods when, in fact, they aren't.

The purpose of the new rule is to spell out specifically the terms for classification. It also outlines the method by which the allowable for a qualified waterflood well would be determined. The main point of the rule is that in no case will the waterflood oil allowable be permitted to exceed the volume of water injected.

Regarding pipeline connections, it is proposed to permit the commission to set the terms when a producer and purchaser cannot agree.

It would work this way: When a producer is unable to get a pipeline to his well, he would ask for a hearing. The commission, if it found his claim justified, could order the connection made and could set the terms for the arrangement.

The depth bracket proposal would permit the commission to determine the maximum efficient rate of production for each bracket in fixing allowables.

Many People 'Don't Know' Oil

The Canadian Petroleum Assn., after a recent public opinion survey, is wondering if the industry shouldn't direct attention to that segment of the public which now has "no opinion" about the industry or of its methods.

The association found that "don't know" and "no opinion" cropped up in as many as 30% of the replies to some questions asked in the poll. To other questions, such answers came from 10% to 15% of those interviewed.

The survey was made for the association by Gruneau Research, Ltd., of Toronto. It was conducted chiefly in Alberta and Saskatchewan. About 900 persons were interviewed.

The association studied the results of the poll to determine the industry's points of strength and weakness in its public relations. It was during this study that the "no opinion" problem became evident.

The association figures it this way: "It's easier to help a person make up his mind than it is to get him to change it once it's made up.

Thus, the 15% or so who up to now have not been informed might be more receptive to information than those who gave positive replies.

Comments one association official: "We've got to get out and talk with these people. If we don't, the Socialists or someone else will. (The socialistic Social Credit Party and Cooperative Commonwealth Federation are powerful political forces in Western Canada.)

And another sizes up the problem like this: "It would seem that we spend too much time talking to our own people and not enough time telling our story to people outside the industry."

The survey also pointed up one good way of getting information to

the public: through oil industry personnel.

Those interviewed were asked where they obtain most of their information about the petroleum industry. Of those who have no direct dealings with the industry, 13.6% replied that they got most of their information from oil industry employees.

Of those who have some dealings with the industry, 30.9% said they got most of their information from oil industry employees.

This prompted association officials to conclude that oil firms should make an added effort to keep their own employees well informed on key issues, so that the employees, in turn, would be able to pass along accurate information to the general public.

The results of the survey indicate that U.S. firms operating in Canada may need to step up their public relations efforts there, too.

For instance, one question asked in the survey was this: "A considerable amount of American money has been invested in the Canadian oil and gas industry. Are you in favor of this?"

Although 57.2% said they approved, 29.5% said they did not.

Also, when asked whether they felt that Canadian firms are handicapped in their competition with U.S. companies in developing Canada's oil and gas, 44.8% said they did.

However, most of those in that category attributed the handicap to a lack of Canadian investment capital and to the lack of Canadian willingness to take risks in oil ventures. Only 3.7% said they felt that Americans have too much "control" of the industry.

The Canadian association was somewhat disturbed by the high percentage of its citizens who apparently would favor direct government participation in oil and gas development.

In the poll, 40% of the public said it would like to see the government take all the risk of oil prospecting and thereby take all of the profits, if any, rather than see private companies take the risk and a "large share" of any profits.

Association officials, surprised by such a reaction, tended to attribute part of this attitude to the hot debates in Parliament over the natural gas export issue. Also, the elections there stirred up considerable oil controversy.

However, the association members feel that since these issues have cooled off, public opinion has tempered, too. But one official comments: "We won't hide our heads in the sand. If there's a job to be done in making clear the advantages of free enterprise, we simply must do that job."

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Looking Ahead in Washington

McGraw-Hill
Washington
Bureau

August 8, 1958

Senate antitrusters will attack industry pricing policies next year. The Kefauver subcommittee thinks uniform, industrywide price changes should be recognized on their face as evidence of collusive pricing. The group cites the new steel price increases as exhibit A, but sees the same pattern in other industries.

It's too late this year for anything but a brief investigation, but subcommittee staffers are priming for a broad assault next year. Oil would be involved. Meanwhile, Texas producers warn that crude price increases will be necessary if the price of oil country tubular goods goes up.

•

The government will make a new study of oil pipeline facilities. The object is to gauge whether facilities are adequate to haul oil that's now shut in to Gulf Coast ports if there's an interruption of Middle East supplies. Hans C. Jensen, of Gulf Oil Corp., is being brought into the Office of Oil & Gas to make the study. Meanwhile, Defense Mobilizer Lee A. Hoegh has scotched any thought that he might review—because of the Iraq crisis—the previous decision against government loan guarantees for construction of oil pipelines from Texas to the East and West coasts.

•

Latin America will line up next for U.S. help with atomic development. The Latins want a deal similar to that for Western Europe, where it is hoped new atomic power plants will stabilize oil imports at the 1963 level. The U.S. will be reluctant to underwrite large-scale atomic development in South American areas where the real need is development of untapped petroleum reserves. But there are many remote areas in the region where small reactors make sense.

•

Coal is stepping up its fight against market losses to oil and gas. The coal industry hasn't had much luck in efforts to cut imports of residual fuel oil into this country. But the National Coal Assn. is again attacking the use of natural gas under boilers—this time in a Federal Power Commission case involving South Texas gas destined for use in Consolidated Edison power plants in New York. Also, coal men are pressing the Pentagon for a rule against conversion from coal heating units at military installations without exhaustive cost studies to show savings.

•

A decision is near on a gas pipeline's right to abandon service. Final arguments were heard this week on Panhandle Eastern Pipe Line Co.'s request to cut off sales to a Detroit subsidiary of American Natural Gas Co. Panhandle argues that the Detroit company doesn't need the gas, while it has 20 local utilities waiting for it. The ruling is expected to set a precedent.

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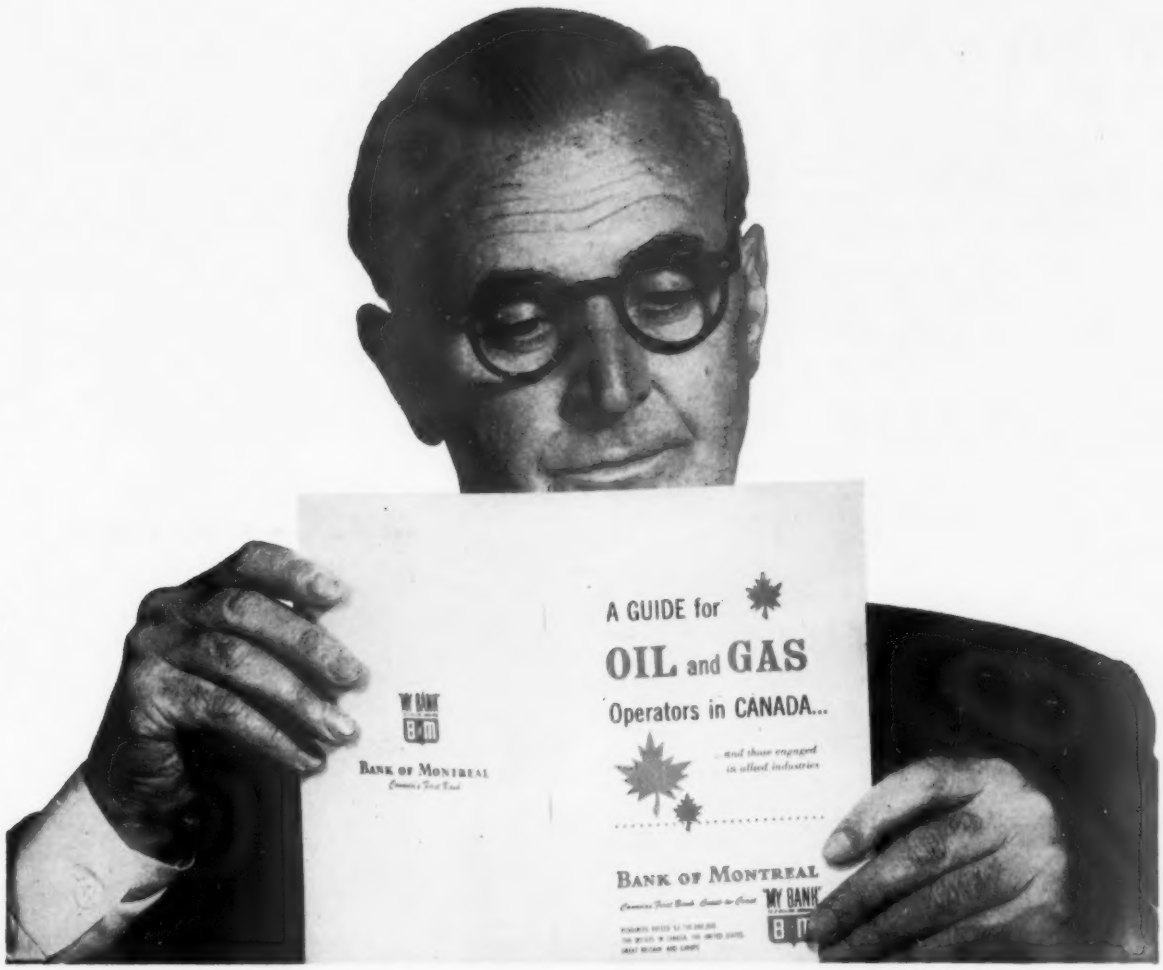
You'll hear more about ethical standards in Washington. Already, the Federal Power Commission and two other regulatory agencies have adopted codes of ethics. FPC's code calls on commissioners and staff members to avoid any "suspicion of unethical practice."



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What's New / IN THE INDUSTRY

Nineteen oil companies have taken "the first concrete step" to build a big-inch crude line from the Mediterranean to the Upper Rhine. The companies have set up a joint subsidiary to get government approvals and to study the project in detail. The plan at present is to build a 30-in. line from Marseilles-Lavera to Strasbourg, with the possibility of extending the line later as far north as Cologne and Rotterdam. The line might move Middle East, Western Hemisphere, or, eventually, Sahara crude.

•

A major plan to pipe more gas to California has undergone substantial revision. El Paso Natural Gas Co. said this week it now plans a 400-mi., 34-in. trunkline from the Salt Lake City area to the California-Nevada border just below Las Vegas. The line would be fed by a new 140-mi. line to be built by Colorado Interstate Gas Co. from Rock Springs, Wyo. Colorado Interstate and Pacific Northwest Pipeline Corp. would supply the line with 400-million cu. ft. of gas daily. El Paso formerly proposed a line from Idaho to California by way of Nevada.

The new California plan will put a crimp in a plan to pipe more natural gas into the Chicago area. Colorado Interstate, with 200-million cf/d committed to El Paso's project, has dropped its plan to supply about the same amount of gas for the midwestern expansion planned for Natural Gas Pipeline Co. of America.

•

Nine more oil companies have reported a net profit drop for the first half of this year from first-half 1957 (PW—Aug.1'58,p12). They are Atlantic Refining Co., 69.7%; Plymouth Oil Co., 65.5%; Humble Oil & Refining Co., 49.9%; Skelly Oil Co., 47.1%; Sinclair Oil Corp., 44.7%; International Petroleum Co. Ltd., 44.6%; Creole Petroleum Corp., 27.4%; Woodley Petroleum Co., 26.8%; and Standard Oil Co. of California, 14.4%.

•

The Oklahoma allowable will remain steady through August, hanging at the 560,000 b/d July level, with a minimum well allowable of 20 b/d. The state Corporation Commission says it hopes to keep the allowable at the same level for "a few months" because of the possibility of a drop in demand this fall or winter.

•

Sinclair Oil & Gas Co. is even stronger now in producing properties along the Texas Gulf Coast, thanks to purchase last week of a full interest in 32 producing wells on ten Liberty County leases. Gross production from the properties, formerly owned by John W. Mecom, is about 1,500 b/d. Sinclair has considerable production in the area.

•

Russia is reportedly building a shale oil plant to handle 4-million tons of oil shale annually. Located at Kochtla Jarwe, Estonia, the plant's estimated production is 10,000 b/d of shale oil for boiler fuel for a large power station.

•

The Oil, Chemical & Atomic Workers and the International Chemical Workers will talk merger next week. Top officers from each union will meet in Cleveland Aug. 14-15 for preliminary discussions on the proposed merger.

INSIDE *Slant*

DOESN'T GO FAR ENOUGH

It's no wonder the independents keep screaming about the high level of product imports, whether they're finished or unfinished.

When the voluntary control plan on crude was expanded to include unfinished gasoline and other unfinished oils, the high level of May and June was taken as the base period.

For example, the average for May was 64,000 b/d and that for June was 145,000 b/d. This compares with an average of 15,000 b/d in the first quarter of 1958 and 79,000 b/d in the second quarter. The average throughout 1957 was only 3,000 b/d.

Therefore, if the average for May and June, which approximates 90,000 b/d, is used as the base, here's how the picture looks:

Imports of unfinished gasoline and other oils are permitted to come in at six times the first-quarter rate and 30 times the average of 1957.

Now let's take a look at finished gasoline, which isn't included in the voluntary control program.

Imports averaged 8,000 b/d in 1957, rose to 15,000 b/d in the first quarter of 1958, and to 31,000 in the second quarter.

And they now are 64,000 b/d, despite the fact that gasoline inventories exceed the 1957 level.

Leroy Menzing
EDITOR

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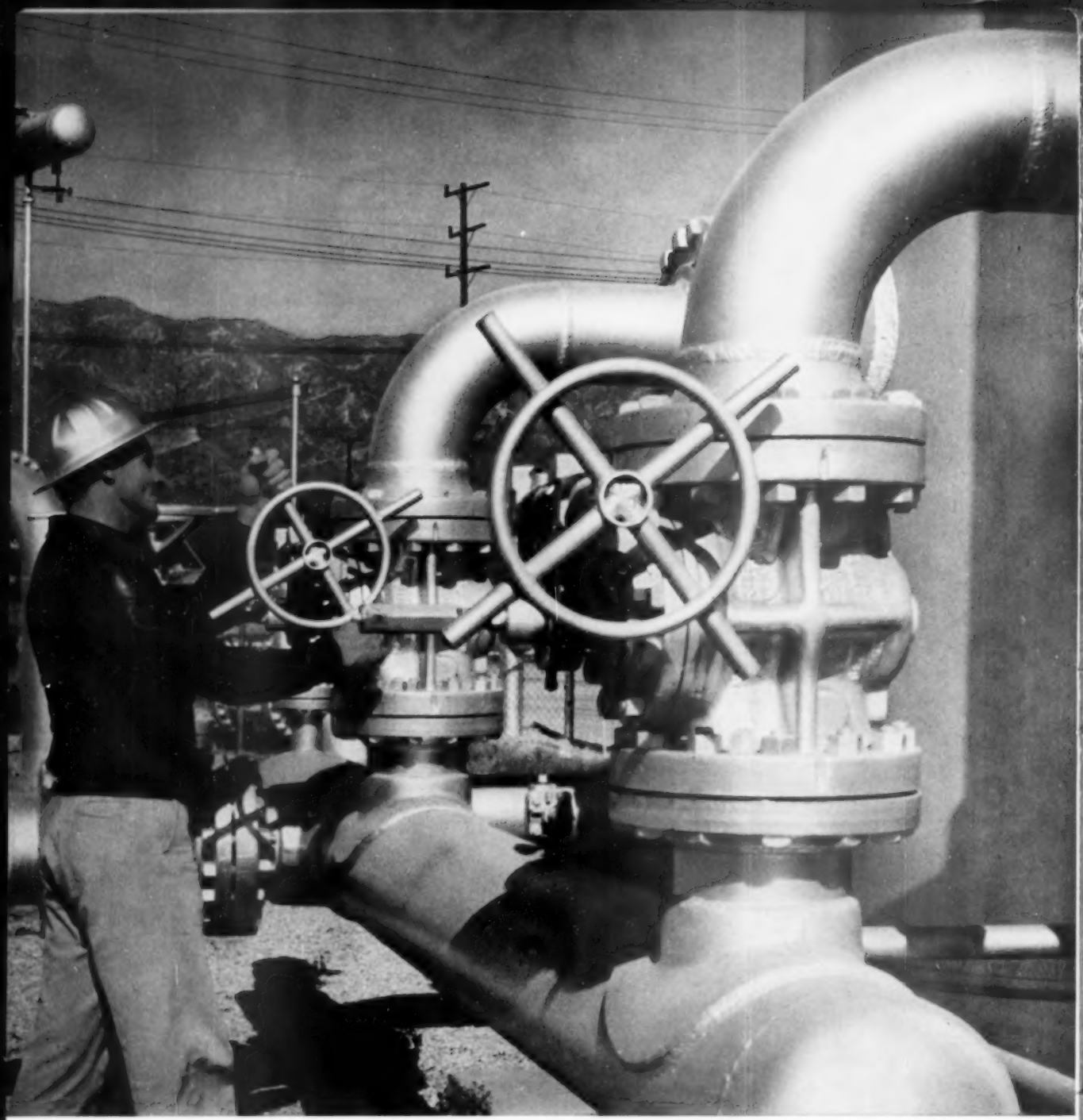

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One Key to Oil Supply Security

Probably at no time in modern history has there been as much simultaneous turbulence as today in all the world's main oil export centers.

Except for the U. S. and a few other countries, most nations of the free world are not self-sufficient in oil. To keep their economies functioning—factories and transportation (trucks, buses, cars, airplanes, etc.)—they depend, to one degree or another, on oil imported from abroad. There are only three main oil exporting areas in the world today: the Middle East, Venezuela, and Indonesia (in order of supply).

And recent newspaper headlines indicate some degree of instability in all three of these areas at the moment: Witness the recent abortive government coup in Venezuela, the civil war in Indonesia, and the latest crises in that most politically unstable of all areas, the Middle East.

* * * *

The oil consuming nations of Western Europe and elsewhere have good reason, therefore, to give serious thought to the security aspects of their vital oil imports.

The more one examines this picture, the more it becomes evident that the key to this security is not so much the security of the particular export source from which a country's imports are drawn. The key is security of the country's particular suppliers.

And it is here that the role of the big international oil supplying companies—five American and two British and Dutch—becomes indispensable in the free world's oil supply pattern.

Most consuming countries do not receive their supplies directly from a producing country. Usually they receive their supplies from one or more of the large international oil distributing companies. The latter may supply a specific oil, say from Iran, to a particular customer in West Germany.

But the strength of the international oil supply companies is that they are equipped with alternative sources to make sure they can maintain their supply commitments in a crisis. Thus, when Iranian oil was cut off during the 1951 crisis, no consumers suffered. The international oil distributing companies merely took the necessary steps to keep those customers supplied with fuel from their other sources all around the world.

The international oil companies thus not only provide oil to the importing nations. They also provide an indispensable form of supply insurance. (That's why even in today's surplus world oil situation, the international companies with huge oil reserves in the Middle East can be seen investing hundreds of millions of dollars in new oil exploration and development in other regions of the world.)

* * * *

This key role of the international oil companies in maintaining the security of supply of Western Europe and other importing areas is not as fully understood as it should be. This is indicated by the growing number of proposals in some consuming countries for making "direct deals" with Middle East producing countries.

With growing oil import requirements, and the lure of apparent "large" profits in Middle East oil production, it is understandable that some consumers at first glance should be tempted by the idea of eliminating the international oil company "middleman."

For example, the much-publicized 1955 oil pricing report of the UN's Economic Commission for Europe (written by its coal committee) urged European governments to start direct negotiations with Middle East oil producing governments.

More recently, a group of Japanese industrial oil consumers decided to go into oil production in the Persian Gulf on their own in order to get "cheap oil." The Swedes recently have been exploring the possibility of some kind of direct oil supply deal with Saudi Arabia, and there is talk currently among some West German groups of direct supply arrangements with the Middle East.

* * * *

Yet what could be more short-sighted? In today's troubled international oil scene, can any importer afford to tie all his oil barrels to one producing country? Particularly if that source can suddenly be cut off not only by a political crisis of its own, but even by developments completely beyond its control (Example: the Suez Canal shutdown, and the Syrian sabotage of the Iraq oil lines in 1956).

The price of oil, of course, is important to a consumer. But oil is such a vital, unreplaceable fuel that the continuity of its supply is even more important. What good does it do a factory or bus firm in Sweden, for example, to have had momentarily cheaper oil if that supply suddenly fails to arrive because of some crisis in faraway Saudi Arabia, or Iraq, or at the Suez Canal? He would have to shut down his factory or service—or search desperately for a new supplier at a time when suppliers were not looking for new customers.

The lure of "cheap" Middle East oil may be enticing—but no importing nation can afford to overlook the question of its security in tying its oil lifelines too closely to any one producing source.

PIER ACTIVITY: This long arm jutting into the ocean is the site of several new offshore tests as . . .

Drilling Livens an Old Pacific Lease

In the lee of growing interest in new offshore exploration in California, General Petroleum Corp. has reactivated one of the state's early offshore leases, and has more than tripled production in a year.

The site of the renewed activity is General Petroleum's 148-acre Ferguson lease, in the Rincon field, Ventura County. The lease was awarded to the company in 1930, and soon after became the scene of one of the first major attempts to develop California's offshore oil by drilling from piers.

The new campaign began a year ago, with the redrilling of one of the older producers on the lease. At that time, production from the lease totaled less than 500 b/d.

Now, after redrilling five wells and drilling three new ones, production totals about 1,800 b/d.

Newly-developed production averages 30- to 31-gravity oil.

The boost in production comes primarily from the development of the lower sand in the Miley zone, one of four producing horizons underlying the lease.

The Miley (Pliocene) lies at depths of 2,700 to 4,000 ft. The First Miley, at 2,700-900 ft., was developed earlier. The newer production comes from depths of about 2,950 to 4,000 ft.

Other producing horizons are at 2,200-500 ft., 2,550-700 ft., and 8,500-9,500 ft.

Electric logs from two wells drilled to the deep Miley zone in 1953 and 1954 set the stage for the present activity, by indicating the potentialities of additional Miley development.

Drilling the new Miley wells takes from 18 to 38 days from spudding to completion. Cost averages about $100,000.

No let-up for the new boom is in sight.

General Petroleum now has five locations lined up, and may have six more, depending on developments.

The activity is spreading to the end of the long pier, which GP shares with Honolulu Oil Corp.

Honolulu, which holds the 80-acre Whitten lease, is driving piles to make room for seven new locations.

The Ferguson lease activity has also spurred interest at Richfield Oil Corp.'s nearby offshore lease.

A short distance seaward from the General Petroleum-Honolulu pier, Richfield is constructing an island to develop an 1,175-acre lease (PW—Jan.17'58,p24). Some observers believe that Richfield's acreage, if oil-producing, could prove to be a continuation of the Rincon field.

To date, General Petroleum has produced a total of 5.9-million bbl. of oil from its offshore lease.

The first test on the lease was drilled in 1930, from an onshore location. It was a dry hole.

The company currently is operating one rig in the continuing development program on the pier.

ON LOCATION: This rig is now drilling at General Petroleum's offshore lease.

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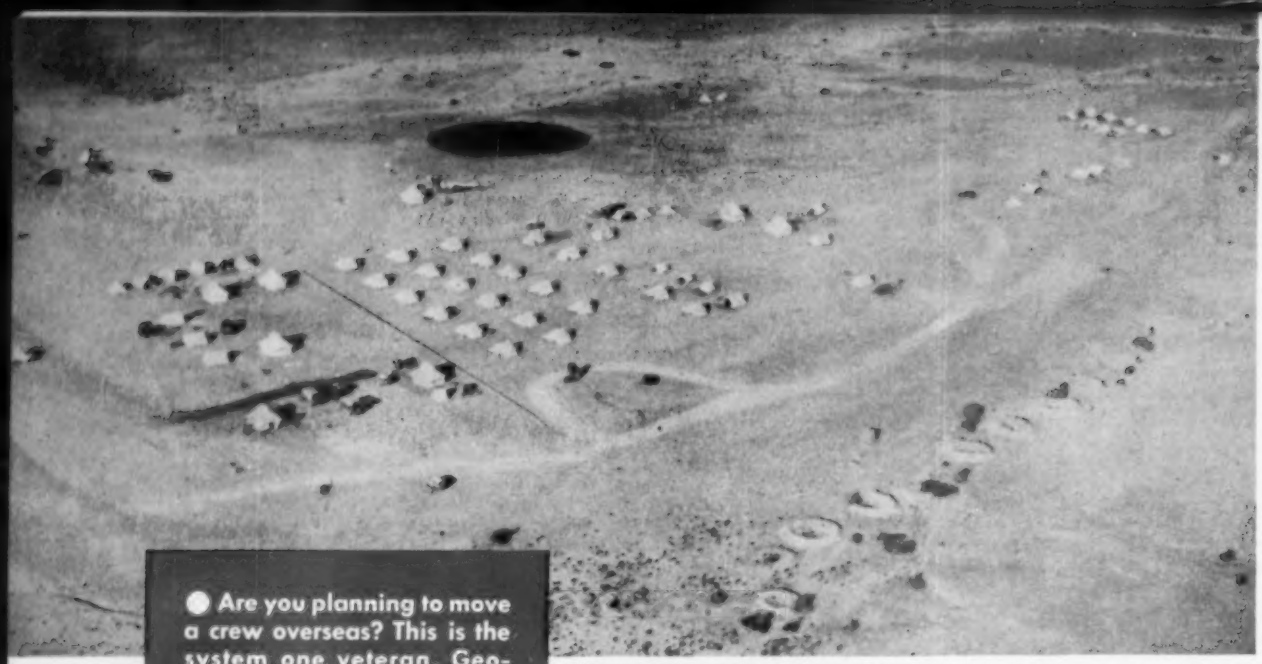

Are you planning to move a crew overseas? This is the system one veteran, Geophysical Service Inc., Dallas, is using to get its crews into operation around the world.

ROUGHING IT IN COMFORT: This is a GSI field camp in Iran. Circular black area in the background is an oiled landing area for helicopters.

Moving Overseas Can Be a

A growing number of American oil companies are learning that "going foreign"—shipping crews overseas—is no simple matter. Geophysical Service Inc., however, is one company that is taking such problems in stride.

Difficulties involved in entering foreign operations range from housing to medical facilities, from shipping to equipment needs, and from customs to visa requirements. Tack on to these the numerous details that arise in processing personnel for overseas jobs.

To handle these problems, GSI, an affiliate of Texas Instruments Inc., has developed a system based on tables and guides. These are based on GSI's 20-year experience in the overseas field. They are updated constantly, with data from the operations department.

In some matters—travel, customs, and insurance—GSI relies on outside agencies. Experience shows that in the long run this saves both time and money, the company says.

GSI estimates that it can cost up to $500,000 to put a crew into a foreign area.

This breaks down this way: $250,000 to $300,000 for capital equipment; $60,000 for expenses—such as shipping, travel, and noncapital equipment; and $30,000 to $40,000 for working capital. But the latter figure sometimes has to be revised upwards to around $90,000 to $120,000 because there frequently is a 90- to 100-day lag in the payback, due to currency and other problems.

Fred J. Agnich, GSI president, stresses the need for adequate financing, pointing out that underestimation of expenses forces the operator to borrow money, on which interest charges cut the profit margin.

After a contract is signed, it usually takes between 90 and 100 days to get a crew into the field. First step: Send a man on a "scouting" expedition to the overseas area.

The scout reports on geography, government, climate, clothing requirements, housing, utilities, home furnishings, food and restaurants, recreation, local diseases, and medical, educational, and religious facilities.

The next step: Selection of personnel for crews.

GSI keeps a roster of possible candidates for overseas work. Selection of personnel usually takes about a month.

GSI's roster has a dual purpose: (1) it gives the contractor an idea of his ability to place a crew in the field, and (2) it gives the employee interested in foreign work an opportunity to have his wishes known.

It also gives the employer a chance to learn more about the man with respect to his attitude, personality, ingenuity, adaptability, and stability.

Men going overseas are sent complete details on how to prepare for the assignment.

This includes medical examinations, passports, innoculations, visas, legal assistance on power of attorney, orientation on job details, country, and travel—including shipment of additional luggage and household effects in the case of married men.

The employee signs a foreign service agreement that details almost everything he would want to know about living in the overseas area.

Besides the luggage that can be taken on the plane, GSI ships 500 lb. for the single employee and 3,000 lb. for the married employee.

Use of married men is increasing because of the heavy demand for experienced personnel.

Qualified single workers, of course, are preferred. But there just aren't enough of them to meet the demand.

A married man must find housing before his family can join him. Then it might take as long as three months after he arrives before his household goods reach him.

Shipment of household goods generally will cost about $200 for a single man, and between $850 and $1,000 for a married man.

Purchase of equipment, most of which is done in the U.S., is the next step.

As its starting point, GSI uses its tables listing equipment requirements, costs, and where purchases can be made.

Most purchases are made domestically because of the time problem. And all equipment purchased here can be assembled at one point.

If purchases are made in foreign countries, delivery time and shipment

IN SAUDI ARABIA, a GSI crewman checks over the day's work in an air-conditioned trailer.

TENTS COME IN HANDY in Turkey, and other areas where the terrain is too rough for trailers to be transported. Tents will last about a year.

Big Headache

of the equipment must be integrated with that of stateside equipment.

The cost and types of equipment vary according to the destination, but some items are common to all.

Crew essentials include two air-conditioned trailers, $15,000; lighting plant, $6,000; camping equipment, $7,000 to $10,000; water distillation plant, $5,000; and water storage tanks, $3,000.

In the Mideast, GSI plans at least two air-conditioned trailers for the kitchen and office. In addition to purchase cost, it takes another $1,000 for shipment of the trailers.

In the Far East, trailers aren't used much because of the roughness of the terrain, and distances involved. So tents are used; they last about a year.

In South America, GSI uses either a tent camp or an old house for headquarters. A house, if it can be found, is preferred, with costs running about $5,000 to revamp a two-story house.

About 90% of the crews get food from the country in which they are working. Sometimes a crew must drill for water. This adds from $16,000 to $55,000 to costs, depending on the type of drilling equipment needed.

Spare parts are a headache.

If too big a stock is carried, bids can't be made competitive. On the other hand, the complement must be inclusive enough to prevent delays in work. GSI draws heavily on the manufacturer's experience as well as on its own in drawing up spare-parts lists.

JUNGLE HOUSING: For work in the interior of Brazil, GSI makes use of the only place not covered with dense growth, the river. Here, a houseboat is home.

BY HELICOPTER OR OXCART, supplies must get to their destination. Here, in Pakistan, GSI equipment is transported by wagon. Note the heavy mud on wheels.

California Wells Redrilled With Air

Air drilling and an air-chemical wash have been put to use in a workover operation in California, and have paid their way by almost tripling production from five wells.

Monterey Oil Co. is using the two techniques—both relatively new in the state for workovers—in the Edison field, Kern County.

Before the program started, oil production from the five wells was 139 b/d. Production is now 400 b/d.

Purpose of the remedial air-drilling is to avoid contamination of the low-pressure producing section in recompleting and cleaning the wells.

The five wells just reworked were drilled in 1945 to a depth of around 2,500 ft. in the Schist formation, a fractured zone. They were completed from open hole.

The workover program involves going back into the holes with air-drilling, cleaning them out with air, and recompleting with liners in the pay zone.

With air-drilling, production from the No. S-4 Hershey jumped from 10 b/d to 236 b/d.

Reworking operations here consisted of redrilling with aerated mud to 2,450 ft.—the same total depth at which the well was completed "barefoot" in 1945.

At the No. S-3 Hershey, air alone was used as a circulating medium to clean out the hole. Then a liner was installed. As a result, production increased from 55 b/d to 76 b/d.

One well, however, failed to respond to reworking. Production from the No. S-1 Hershey fell from 39 b/d to 20 b/d. Operators feel the well may need a larger pump.

An air-chemical wash job at the No. S-4 McCowan 13-A boosted production from 15 b/d to 42 b/d.

The 2,800-ft. well was first blown clean with air. Then 100 bbl. of a chemical solution was allowed to stay in the well overnight. It was cleaned again with air before being put back on pump.

The air-chemical wash also paid off at the fifth well. The No. S-1 McCowan 13-A is now producing 26 b/d. Before, it yielded 20 b/d.

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California Offshore Lease Award Delayed

The California State Lands Commission has delayed awarding a lease on one offshore tract offered at its recent sale, pending a review of the tract's geology.

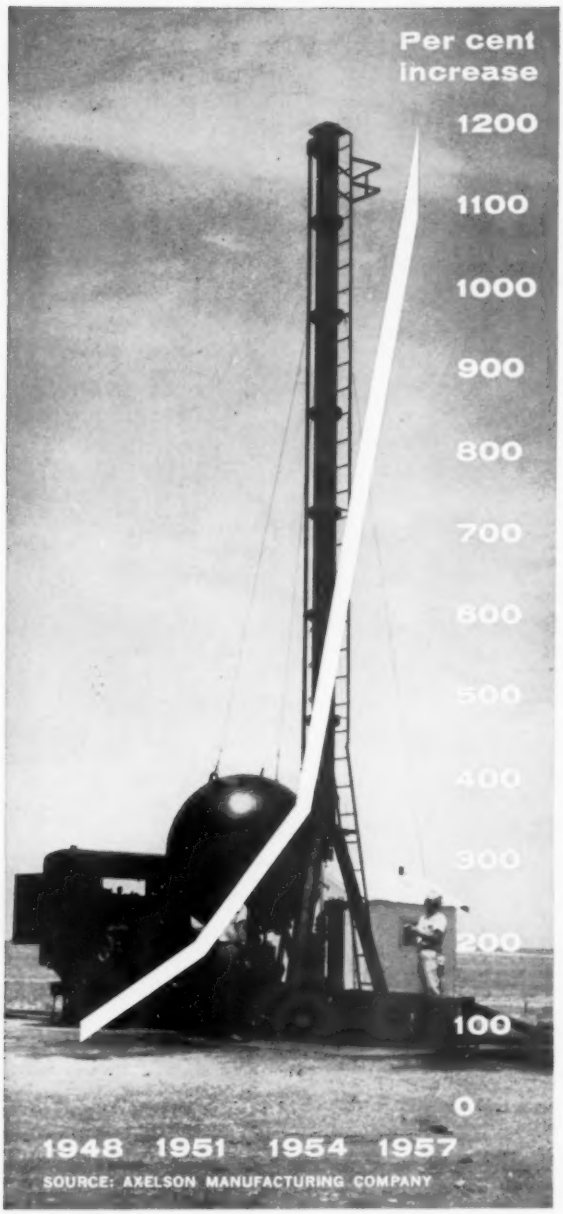
High bid for the tract, parcel B, was made by Humble Oil & Refining Co. and Standard Oil Co. of California, with an offer of $770,837. This was the smallest high bid offered at the sale.

A decision is expected at the commission's next meeting, later this month.

The other four tracts offered for lease have been awarded to high bidders (PW—Jul.4'58,p12).

The tracts, totaling 3,840 acres each, are checkerboarded in the offshore area extending westerly from the Elwood oil field to Point Conception, Santa Barbara County. Tracts are 2 mi. wide and extend 3 mi. beyond the shoreline.

Companies awarded leases will have a three-year primary period in which to get operations under way. Operators will be permitted to develop two parcels from piers. Others must be developed from islands or offshore platforms.



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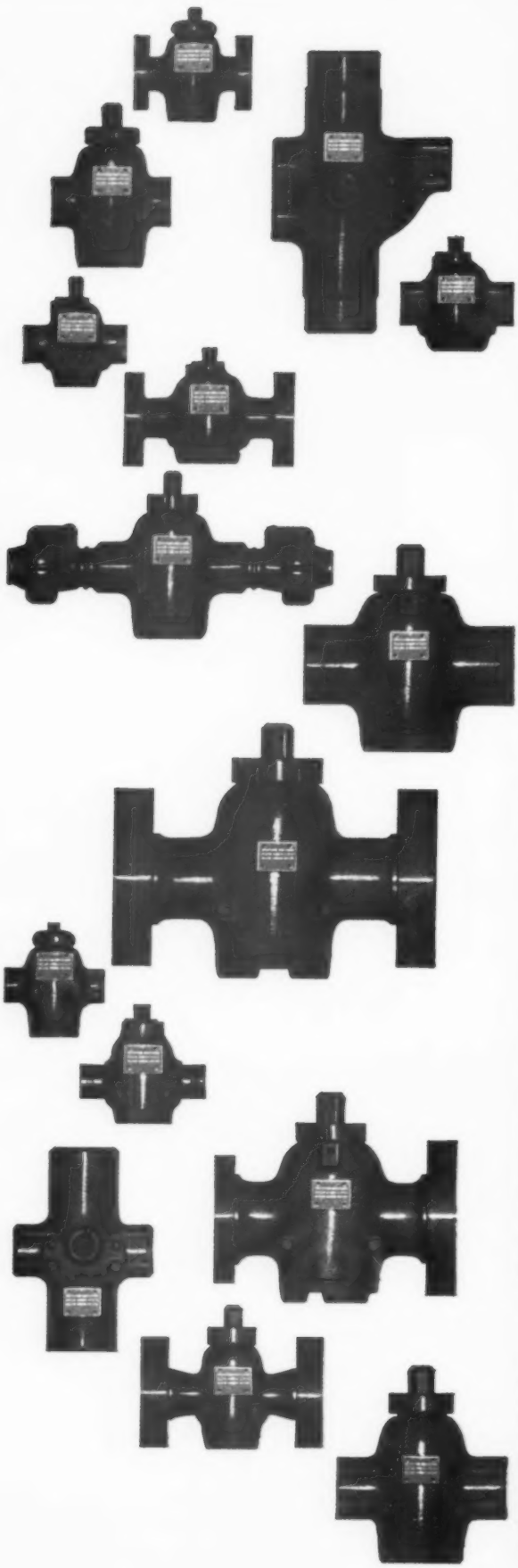

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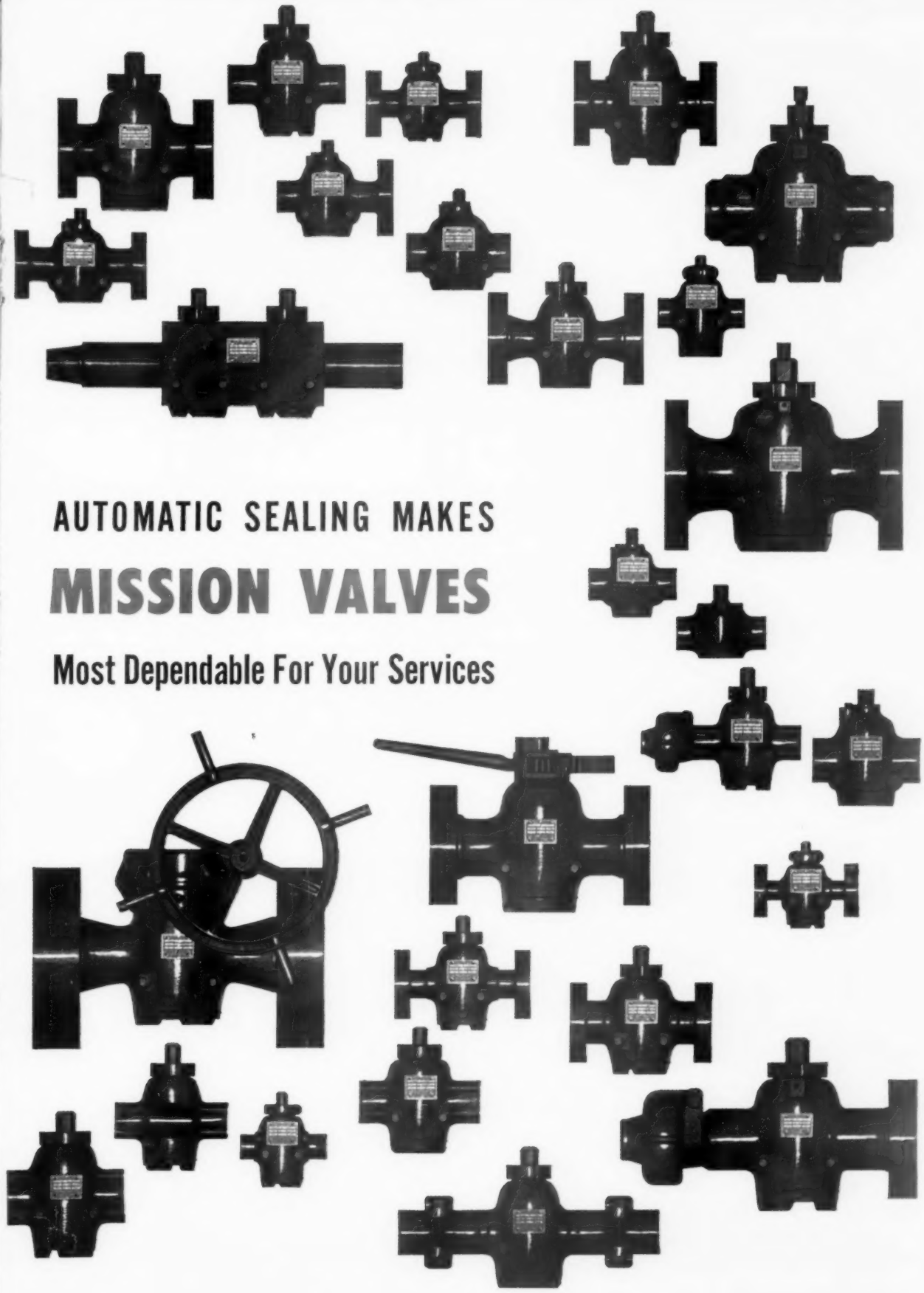

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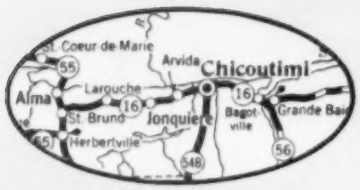
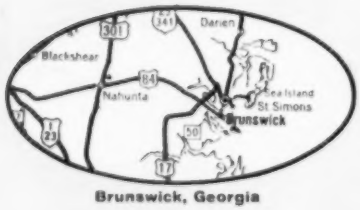


Arvida, Quebec

Niagara Falls, New York

Saltville, Virginia

Huntsville, Alabama



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What's New / IN EXPLORATION, DRILLING, PRODUCTION

The Dept. of the Navy has awarded a contract to Intex Oil Co. to drill on the Teapot Dome naval petroleum reserve, in Wyoming

The Navy plans to have eight wells drilled during the current fiscal year, to prevent drainage from wells on the flank of the reserve.

The contract must be cleared by various congressional committees, and the Dept. of Justice, and would require the signature of President Eisenhower.

•

The Texas Board of Insurance has adopted lower rates covering drilling risks in the "blue water" tidelands of the Gulf of Mexico, but has sharply increased the rate for inland waters.

The "blue water" rate in the Gulf has been cut from 75% above the land rate to 60% above it. The board also decided that the 60% extra charge will be applied to all drilling operations in salt water that are not connected to land by fixed approaches. Formerly, the land rate was applied to drilling insurance in protected waters —bays, marshes, and other areas near land.

•

Tennessee Gas Transmission Co. has taken over the management of Middle States Petroleum Corp., after acquiring 91% of the company's stock through an exchange (PW—May30 '58,p29).

•

At least one major company is not yet ready to give up on oil prospects in Nevada.

Union Oil Co. of California is doing both geological and geophysical work this summer in Nevada's Great Basin area.

Since discovery of oil in the state in 1954, only three wells have been completed, and total production averages 100 b/d.

•

Imperial Oil Ltd. is drilling below 2,000 ft. at its second wildcat on Prince Edward Island, Canada.

The first wildcat, near Wellington, was a dry hole. The rig was moved 10 mi. northeast to Port Hill. Geologists hope to pick up, at around 8,000 ft., the same formations that are present in New Brunswick's Stoney Creek field, to the west.

North of Imperial's test, Standard Oil Co. of California is doing seismic work on its concession, which covers the northwestern part of the island.

•

A sale of 623,587 acres of lease and permit acreage in British Columbia netted the provincial government a total of $186,302.

Gulf States Oil Co. of Canada and El Paso Natural Gas Co. of Canada paid $36,688 for 18,253 acres northwest of Fort Nelson.

•

The Texas Railroad Commission has approved a unitization plan for the West Leuders (Hope) field, Jones County, West Central Texas. Bridwell Oil Co. and other operators estimate that a water injection plan will boost oil output by 140,000 bbl.

•

A joint leasing campaign is under way in the West Los Angeles (Calif.) area, indicating probable success of two "country club" wildcats.

Both Signal Oil & Gas Co. and Richfield Oil Corp. are seeking leases in the area.

River, Stay 'way...

Last week, Texas had a 6,400-ft. well. Now the well is apparently in Oklahoma.

A Standard Oil Co. of Texas well initially was drilled 330 ft. south of the Red River, the border between Texas and Oklahoma. But now, because of an unusually heavy flow of water, the well is 100 ft. out in the river.

The company thinks this puts the well into Oklahoma—but it's not sure. And that creates a problem:

The well is no longer a commercial producer, and the company wants to plug and abandon it. Should it ask permission of the Oklahoma Corporation Commission or should it ignore the river shift and ask the Texas Railroad Commission?

Signal, as operator for itself and Richfield, has cemented 7-in. casing at 9,830 ft. in one test, No. 1 Signal-Richfield, section 36-1s-15w, on the city-owned Rancho Country Club. Pipe has been run to below 7,000 ft. in No. 1 Signal-Richfield-Community, section 25-1s-15w, on the private Hillcrest Country Club.

•

Louisiana, is feeling the pinch of slow bidding for oil and gas leases.

Only 7,700 acres out of some 30,000 acres of state lands offered by the Louisiana Mineral Board drew bids at the first sale of the fiscal year, on July 17. It was the lowest bidding in 14 years. Bonuses totaled $445,706.

•

The seventh Permian Basin Oil Show will be held in Odessa, Tex., Oct. 16-19.

This year's show will be held, as in the past, at the Coliseum and fair grounds in Odessa.

Officers of the show are Arno Anders, Continental Oil Co., president, and Luther Reynolds, Pan American Petroleum Corp., and J. C. Hostetler, vice-presidents.

•

The Alberta government sold 18 out of 19 parcels offered at its July 29 lease sale, which brought the province $1,572,475.

Only 8,320 acres remained unsold out of 143,360 acres offered.

Texaco Exploration Co. was the biggest buyer, paying $517,127 for 10,320 acres in the Olds area, south central Alberta, and $155,329 for other parcels.

•

The third semiannual school of Gas Technology will open for a six-week term on Sept. 22, at Conroe, Tex.

The course covers the production, gathering, purification, and transmission of natural gas. Further details are available from the Petroleum Extension Service of the University of Texas, Austin.

•

The U.S. Geological Survey has issued a report on ten years of oil exploration in northern Alaska.

The report, "Geological Survey Pro-

fessional Paper 301," may be obtained from the Superintendent of Documents, Washington 25, D. C. Price: $2.25.

•

Engineering

A new line of tubing swabs has been introduced by Byron Jackson Tools, Inc., a subsidiary of Borg-Warner Corp.

The new swab line features both cup-type rubbers and the multidisc type. The rubbers are designed for flexibility of operation, and automatically adjust themselves to different loads.

•

Correction

In a story on Alabama's Citronelle field (PW—Jul.18'58,p32), it was stated that field reserves were estimated at 300-million bbl., double that of a year ago. Core Laboratories, Inc., says that in the past it had tentatively given 300-million bbl. as the volume of oil originally in place in the field.

Core also says that a prediction, credited to the company, that the field will produce half as much crude after the bubble point is reached as it has when it reaches that point is out of line with the company's concepts and statements regarding Citronelle.

•

Drilling Highlights

Oklahoma—Sinclair Oil & Gas Co. has another zone discovery in Harper County, where it recently completed No. 1 Holcomb as an Arbuckle discovery. No. 1 Rosa Lee Kuhn, section 6-28n-22w, recovered 450 ft. of 42-gravity oil on 20-minute drillstem test of the Lansing (Pennsylvanian) lime at 4,560-605 ft. The test is ½ mi. north of No. 1 Holcomb.

Kansas—Phillips Petroleum Co. No. 1-A Hartley, section 3-6s-37w, confirmation test to the company's Sherman County discovery, No. 1 Llanos, swabbed at the rate of 28 b/d of oil from perforations in the Cherokee at 4,768-74 ft. Earlier, good oil shows were recovered from the Kansas City, based at 4,538 ft.

West Texas—McElroy Ranch Co.-Rowan Drilling Co. No. 1 J. O. Nobles, section 31, block 40, township 1s, T&PRR survey, Midland County, was completed for 118 b/d of 40.6-gravity oil through 19/64-in. choke from open hole at 9,800-52 ft. in the Pennsylvanian. The well, originally drilled to 5,075 ft. and abandoned, is 2 mi. northeast of Hallanan field.

Texas Gulf Coast—Lion Oil Co.-Republic Natural Gas Co. No. 1 McDonald, Joseph White Survey, Brazoria County, was completed as a lower Frio sand discovery 8 mi. from West Columbia. Open flow potential is 27-million cu. ft. of gas per day with 18½ bbl. of distillate per million. Production is from perforations at 9,922-34 ft.

Utah—Carter Oil Co. No. 8 Bluff Bench, section 21-40s-22e, San Juan County, was completed for 264 b/d of 40.6-gravity oil through ⅞-in. choke and perforations in the Hermosa A-2 zone at 5,344-76 ft. The well is 1½ mi. southeast of Carter's Bluff Bench Paradox discovery.

North Dakota—Anschutz Drilling Co. No. 1 Feland, section 12-162n-83w, Bottineau County, recovered 2,700 ft. of oil, 100 ft. of gas- and mud-cut oil and 100 ft. of water on 2-hour test of the Mission Canyon (Mississippian) at 4,059-89 ft. The test is 2 mi. south of Haas field.

Illinois — Development Associates No. 1 Smith, section 32-1n-13w, Wabash County, was completed for 65 b/d from the Tar Springs at 2,026-36 ft. The well is more than a mile from nearest Tar Springs production.

Texas Panhandle—Unapache Co. No. 1 C. B. Mathers, section 132, block 42, H&TC survey, an upper Morrow sand discovery in Hemphill County, flowed at the rate of 13 bbl. of oil per hour on 9-hour test through 12/64-in. choke and perforations at 9,894-902 ft. after fracturing. The test is 16 mi. east of oil production in the Lips Ranch area of Roberts County.

Louisiana Offshore—Sinclair Oil & Gas Co. No. 1 OCS—0439, block 188 in the Eugene Island area, was completed for 85 b/d of oil from perforations at 9,272-78 ft. The well is 3 mi. southeast of nearest oil production.

Florida—Amerada Petroleum Co. has abandoned No. 1 Lykes Bros., section 1-41s-30e, Glades County, after drilling to 10,993 ft. in the Fredericksburg formation.

South Louisiana — Commonwealth Oil Co. et al No. 1 Odom Gilbert, section 8-9s-5e, Lafayette Parish, was completed for 245 b/d from perforations at 11,538-54 ft. The well is 1 mi. west of Anse La Butte field.

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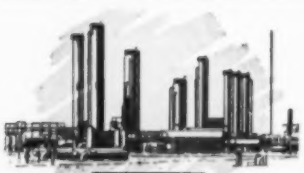

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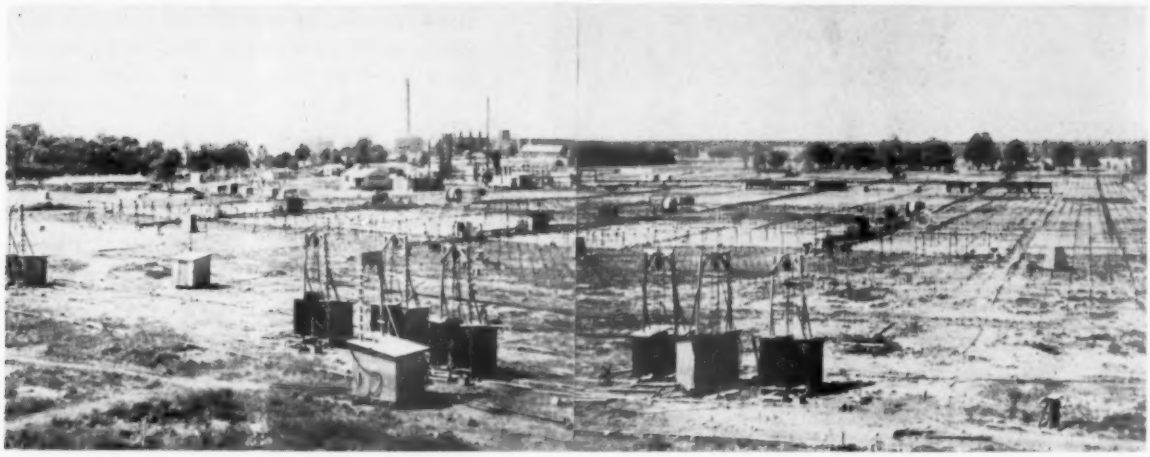


UNDERGROUND ELECTRIC HEATERS vaporize oil shale hydrocarbons out of a Swedish shale bed, thus avoiding the need for mining and crushing the oil shale to retort shale oil. This is but one development showing why . . .

Shale Oil Is Commercial in Sweden Now

While the U.S. is just beginning to awaken to the possibilities of exploiting its vast oil shale reserves, Sweden has had a commercial shale oil industry since 1942.

Swedish oil shale products are made at the Ljungstrom plant of Svenska Skifferolje Aktiebolaget (Swedish Oil Shale Co.), near Kvarntorp in central Sweden. During the fiscal year ended June 30, 1958, products made from oil shale included 250,000 bbl. of finished gasoline; 500,000 bbl. of domestic and industrial fuel oils; 6-million gal. of propane and butane; 38,000 tons of sulfur; 24,000 tons of ammonia; and 55,000 tons of quicklime.

Gross receipts for oil shale products produced during fiscal 1958 were $12-million. According to Claes Gejrot, managing director of Swedish Oil Shale Co., the plant has been profitable on a fully competitive basis with imported crude for years.

Sweden was forced to develop its shale oil industry to compensate for a lack of domestic crude and a World War II blockade on shipments of liquid fuels.

The Swedish government formed the oil shale company in 1941 for the specific purpose of recovering oil from its oil shale reserves at Kvarntorp. Despite an acute shortage of materials and very little background in oil shale technology, production of shale oil began in April, 1942, at a rate of 95,000 bbl. a year.

Since then, oil from oil shale has been produced without interruption. New units have been added each year, and a 20% capacity increase is presently under way.

Underground electric heaters to vaporize the hydrocarbons in oil shale deposits, thus eliminating the need for expensive mining procedures, is the most interesting recent development by Swedish oil shale scientists.

One of the big expenses of producing liquid fuels from oil shale is the mining and grinding of the shale to prepare it for the retorting (heating to drive off the hydrocarbons).

Along with more conventional retorting of oil shale, the company is experimenting with electrical heaters located in drill holes throughout the oil shale bed (picture, above). The heat vaporizes the hydrocarbons, which rise through other drill holes.

Nearly 2,500 holes, each 100 ft. deep (to reach through the 50-ft. overburden and to the bottom of the 50-ft.-thick shale bed), have been drilled. Spacing between the holes is about seven feet. Each hole is cased with 100 ft. of pipe.

Electric resistance heaters are inserted into 85% of the holes drilled into the shale bed. The other 15% of the holes serve as hot-vapor drawoffs.

Vapors began to leave the field six to eight weeks after the heating was begun. Continued heating for about 16 weeks recovered about 70%.

The oil and gas vaporized out of the shale has three times the calorific

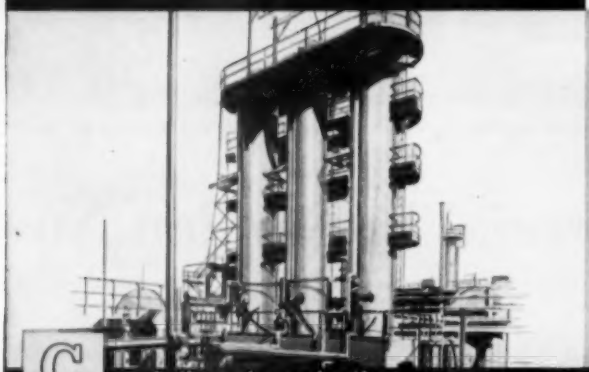
SHALE OIL VAPORS from oil shale retorts and the heated underground shale bed are condensed and sent to a refinery to be made into gasoline and heating oils. The structure to the right is the plant making ammonia from shale retort gases.

Somewhere on these pages is a

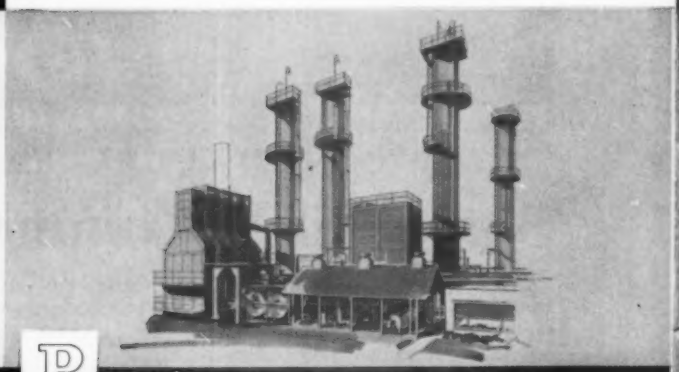
UOP

answer to most every petroleum processing problem.

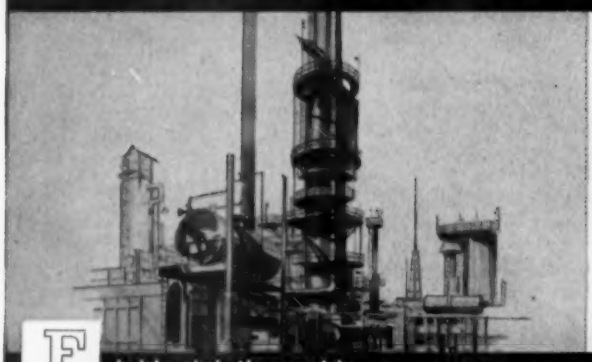
Working out the solution to a processing problem can be a pretty tough assignment for any refiner. But this is a UOP specialty and it's highly probable that UOP can come up with the right answer. Perhaps, we don't have all the answers right on tap but our more than 40 years of research and engineering development in oil refining technology is pretty good assurance that we can work them out. Quite possibly you will find



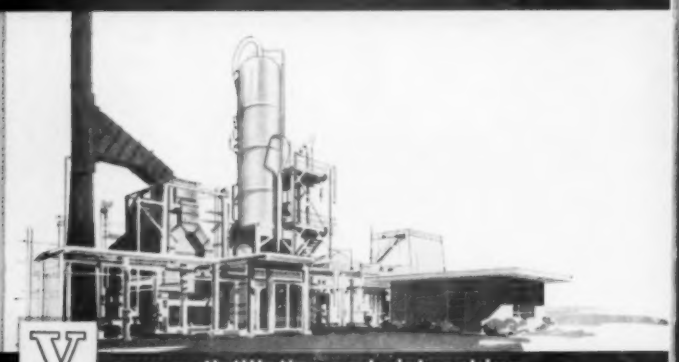
Catalytic polymerization A process for converting propylene and butylenes to high grade gasolines



Penex® The first practical process for upgrading pentane and hexane fractions

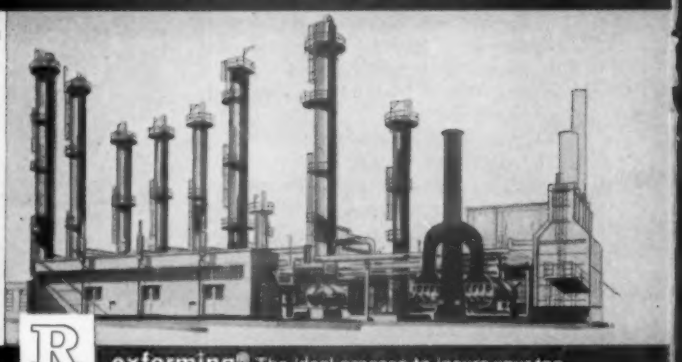


Fluid catalytic cracking Improved heavy oil conversion process for higher yields and octane numbers



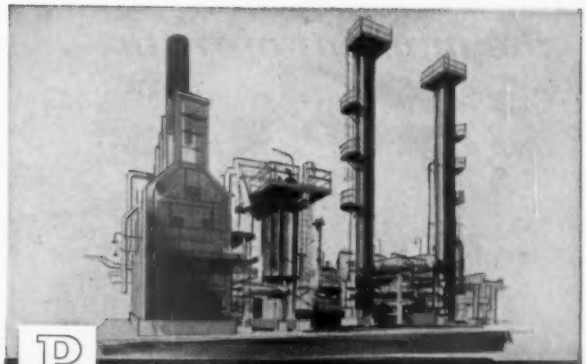
Vacuum distillation and visbreaking Efficient, economical processes for feed preparation

Low pressure coking A process that adds market flexibility

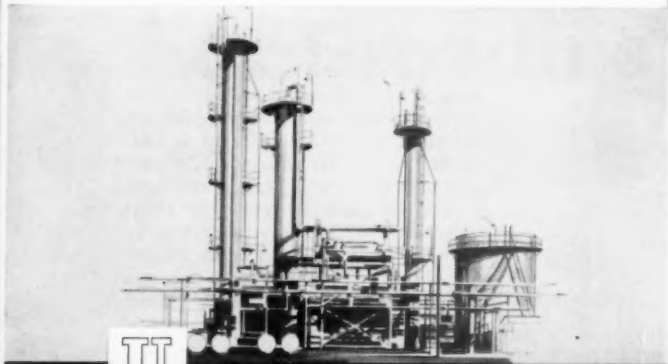


Rexforming® The ideal process to insure your top octane position

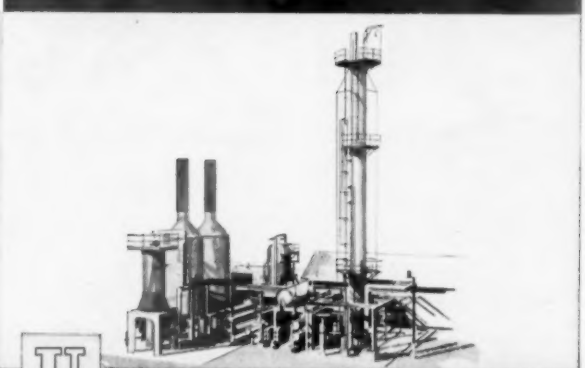
the solution among the processes shown here. For these represent only some of the refining and petrochemical processes UOP makes available to all refiners, anywhere. If you would like to know more about all the refining and petrochemical processes available from UOP we'll be glad to send you our handsome new 36 page brochure describing these more fully. Just drop us a line on your company letterhead.



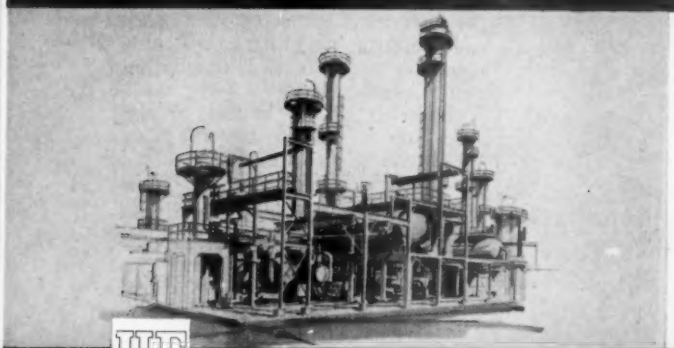
Platforming® The most popular process for upgrading gasolines



Unisol® A finishing process without octane degradation

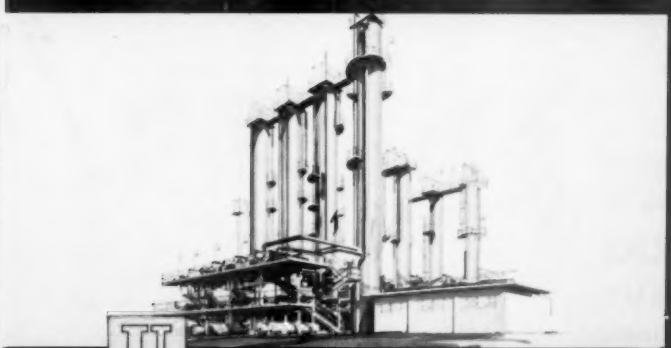


Unifining® A modern process for completely purifying petroleum distillates



HF Alkylation A catalytic process for producing alkylate

Thermal cracking An improved design of a basic refining process



Udex® A process for separating gasoline into high and low octane fractions

UOP® UNIVERSAL OIL PRODUCTS COMPANY

30 Algonquin Road
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MORE THAN FORTY YEARS OF LEADERSHIP IN PETROLEUM REFINING TECHNOLOGY

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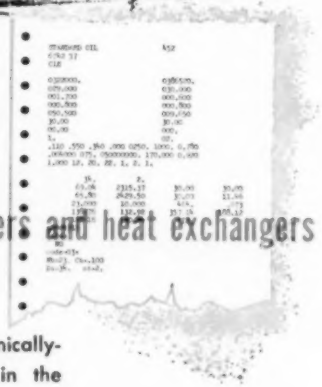
the moment of truth...

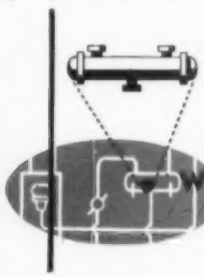


. . . about electronic computers and heat exchangers

Nobody disputes the accuracy of electronically-computed findings or calculations, but in the solution of heat transfer problems, the electronic computer performs only one of several important steps.

At the core of Western's reputation for designing and building heat exchangers of true quality and long-life efficiency, is the step that follows our electronic computations: the precise and pertinent interpretation of these findings in the light of our engineers' combined experience in the heat transfer field, as well as an intimate knowledge of each customer's needs.

The results of electronic wizardry are valuable only if you know how to use them.



WESTERN
HEAT EXCHANGERS
WESTERN SUPPLY COMPANY
P.O. Box 1888 – Tulsa, Oklahoma

value of the heating electricity used.

For each 25 kwh. of electricity used, 1 gal. of oil and 120 cu. ft. of 1,000-Btu. gas are recovered. These figures are for oil shale deposits averaging 5.6% oil (the Mahogany Ledge in Colorado averages 12%).

The amount of electricity consumed is proportional to the amount of rock heated, not to the oil yield. Richer deposits would yield greater amounts of oil and gas.

The mainstay of the Swedish shale oil industry is the "Kvarntorp" retort.

This retort was developed during World War II especially for use with Swedish oil shales. A total of 3,920 of these retorts, with a combined capacity of 3,900 tons a day for oil shale, are now in use.

The Kvarntorp retort is a vertical pipe, 8 in. in diameter at the top and flaring toward the bottom. Crushed oil shale (about the size of a half-dollar) is fed into the top. There are five retorts in each heating oven.

The oil shale is heated to about 1,000F as it descends the retort by gravity. Spent shale is discharged into the bottom of the oven. Oil and vapors are drawn out of the retort through a smaller vertical suction pipe in the center of the retort pipe.

About 10% of the weight of the spent shale is carbon. Most of this is burned off in the bottom of the oven. The resulting hot combustion gases travel upward around the retorts, heating them and the oil shale to retorting temperature.

Boiler tubes are located in the shale ash to prevent the ash from fusing and to generate (or superheat) steam, which is converted into electricity at a nearby power plant.

Two other retorting methods used at the plant since World War II are less efficient than the Kvarntorp retorts, and will be abandoned.

One retort, the HG or Rockesholm retort, is similar to those used in Scotland for decades. There are 72 of these retorts, with a total capacity of 800 tons a day of oil shale. However, these are scheduled for shutdown within the next few years.

The other retort, called the IM retort, is a tunnel oven similar to the Swedish tunnel ovens used in Estonia for many years. One of the two 650-ton-a-day tunnels has been abandoned already. The other will be shut down by the end of 1958.

Vapors from the three retorting systems and the underground recovery system are condensed and pumped to a refinery for further processing.

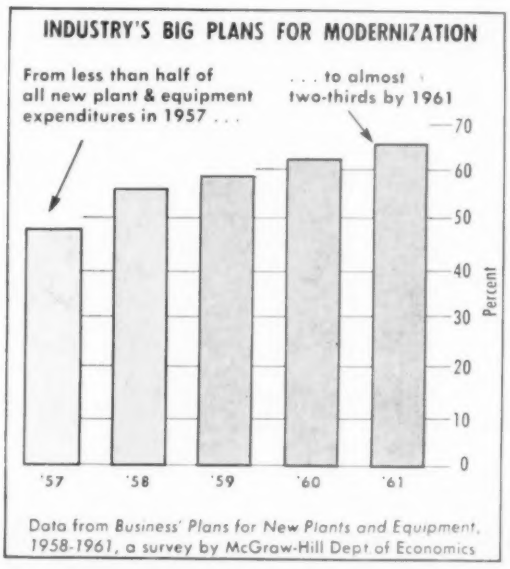
At the refinery, oil is steam-

PLAN '59

A MESSAGE TO AMERICAN INDUSTRY

Modernize Now — For Growth and Profits

The biggest challenge facing American industry today is that of thoroughly modernizing its plant and equipment. This is the test period for companies to prepare for success — or failure — in the '60s. Success depends decisively on one key policy — modernization, for growth and profits.



The problem of business recession is fading. Sales and industrial production are moving up again, slowly. Business is swinging back into its normal course. This is growth, not retreat and recession. If the recovery takes us back to the normal growth trend, industrial production will be up 15% to 20% by 1960.

But how can we get this growth in production without the plague of price inflation that has blighted our economy in recent years? And, of fateful consequence for the individual business firm, how can it keep its costs down enough to make a decent profit — something a very large share of American companies are not doing today?

This is the new challenge that confronts business as the recession is left behind.

Nature of the Challenge

The recent record on costs and productivity is not reassuring. Since 1947 wages in manufacturing have risen 68%, while output per manhour has gone up 32%. This is a dismal record for a nation that has prided itself on

gains in industrial efficiency. Clearly, if we are to avoid continuing inflation, labor must key its wage demands more closely to productivity increases. But clearly, also, we must do far better in raising output per manhour. Otherwise, industry cannot hope to offer stable prices, and still make a profit.

What, then, is the answer? It is modernization of plant and equipment, the replacement of obsolete producing facilities with new and more efficient machinery and buildings. Only in this way can industry hope to increase production, hold down costs and make a good profit showing in the years of growth that lie ahead.

Industry's Answer

The chart on the preceding page shows how American industry is buckling down to the task of modernizing its facilities over the next four years. It is planning to replace old equipment with new machines that will raise output per worker not just 2% or 3% a year, but more like the 5% annual gain in productivity that this nation achieved in the years following World War I.

Since World War II we have had to contend with shortages of capacity and materials that have held back the job of raising productivity. But today the machines and techniques are available. And industry is getting set.

A broad sample of manufacturing companies surveyed by the McGraw-Hill Department of Economics earlier this year reported these plans: **In 1958, expenditures for modernization will rise to 56% of total investment in new facilities — compared to 48% in 1957. And this emphasis will increase until by 1961, expenditures for replacement and modernization account for two-thirds of all capital spending by manufacturing companies.** In dollar terms, manufacturers will spend more on modernization in each of the four years 1958-61 than in any previous year except 1957.

Can It Be Done?

These are big plans. Can they be carried out? Is it too visionary to hope that after a decade of expansion, industry can now find the outlets for huge amounts of capital investment in the area of modernization? The answers are important to business and the nation, because on this new wave of modernization depends our hope of holding down costs and prices, and also the prosperity of the vital capital goods industries — generators of boom and bust in our economy.

To ensure that industry gets the answers, McGraw-Hill's 34 business publications are now starting a coordinated effort — the largest editorial effort in the history of our company — to find, report and publish the opportunities for modernization at a profit, in the fields we serve. These special reports will begin in late September and will run through November, with appropriate coverage for the specific needs of each field. We are proud to share with industry the responsibility for making sure that no opportunity is overlooked in the drive to modernize now for growth and profits.

This message was prepared by the McGraw-Hill Department of Economics as the first step in our company-wide effort to report on opportunities for modernization in industry. The Department is also preparing a longer report, on modernization as a national problem, for publication in October.

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Donald C McGraw

PRESIDENT

McGRAW-HILL PUBLISHING COMPANY, INC.

distilled in a topping still to make a light fraction (boiling below 390F) and a heavy fraction. The light fraction has about 2% sulfur, and is treated with caustic soda and sulfuric acid.

Two gasolines are produced at the refinery—regular and premium. Most of the gasoline is sold in the Orebro area(about 15 mi. from the refinery). Even the major international oil companies sell shale gasoline from Kvarntorp in central Sweden.

Medium-grade and light domestic fuel oils are also produced. Untreated heavy oil from the topping unit makes the medium-grade fuel oil. Topped Ljungstrom (underground vaporization) oil makes the domestic fuel.

Gas from the retorts contains hydrogen, hydrocarbons, hydrogen sulfide, nitrogen, and oxygen.

The oxygen, though only about 1% of the total gas, is removed to prevent polymerization and difficulties in subsequent processing steps. The removal is accomplished by burning hydrogen with the oxygen in the presence of a catalyst.

Deoxidized gas, containing about 20% hydrogen sulfide, is sent to an Alcazid process unit for solvent removal of the hydrogen sulfide. The hydrogen sulfide from this process is converted, by partial combustion with oxygen in a hydrogen atmosphere, into pure sulfur.

After the oxygen and hydrogen sulfide have been removed from the gas, it is further processed in an ammonia plant.

Synthesis gas (proper mixture of hydrogen and nitrogen) for ammonia manufacture is made by cracking the shale oil gas in the presence of steam. Carbon monoxide from the cracker reacts with steam to form carbon dioxide and more hydrogen. The carbon dioxide is removed from the synthesis gas by a water wash.

The nitrogen needed is already present in the gas. This, mixed with the hydrogen in a 3-to-1 hydrogen-nitrogen ratio, is compressed to 5,000 psi. and converted into ammonia in a catalytic reactor.

The shale ash from the retorts, after the carbon is burned off, is used in brick manufacture. It also contains recoverable amounts of uranium.

The shale in the upper layers of the deposit holds about ½ lb. of uranium per ton of shale. The Swedish Atomic Energy Commission is leaching some of this oil shale to recover the uranium. One company is making bricks from the rest of the ash.

What's New / IN PROCESSING

Continental Oil Co. is installing an electronic brain designed to maintain peak efficiency in the operation of a catalytic reformer at its Ponca City (Okla.) refinery.

The computer system is being installed by Beckman Instruments, Inc., on Conoco's No. 2 cat reformer, which was completed in 1957. Capacity of the unit is 9,000 b/d.

The system will make a complete check on the reformer's operations every 90 seconds. It will automatically compute production yields and other operating statistics, provide a continuous record of plant performance, alert operators if any of 100 key processing operations are not normal, and allow operators to calculate yields and temperature drops.

The computer system is fully transistorized to permit it to operate continuously for extended periods of time. Its weight is 2½ tons.

•

Richfield Oil Corp. will make formal entry into the petrochemical field Sept. 1 with production of benzene and toluene.

Initial products from the $6.5-million plant, which went on stream early in June at the company's Watson (Calif.) refinery, will be 1,250 b/d of benzene and 1,500 b/d of toluene. The company expects to add other products soon.

All toluene is destined for avgas, but the benzene will be sold on the general Southern California market.

•

Capacity of the Mobil Oil AG refinery at Bremen, Germany, has been more than doubled by placing a new 16,000 b/d distillation unit on stream.

The new plant is a combination atmospheric-vacuum distillation unit. High-grade lubricants will be made from vacuum unit tailings.

The original capacity of the refinery, before placing the new distillation unit on stream, was 15,000 b/d.

•

Shell Development Co. and Monsanto Chemical Co. have been cited by the Air Force for cooperation with the military in developing radiation-resistant fluids.

These fluids, polyphenyl ethers, are considered a major advance in lubrication in radiation atmospheres. The ethers are composed of benzene and oxygen. They remain liquid from 20F to 800F, retaining lubrication properties throughout this temperature range.

Developed for the Air Research Development Command, polyphenyl ethers are two to five times more stable under nuclear radiation than existing organic lubricants, the Air Force says.

•

Japan's second combination UOP Unifining-Platforming unit has gone on stream at the Yokohama refinery of Nippon Petroleum Refining Co., Ltd.

The unit is designed to handle 3,300 b/d of naphtha derived from Middle East crudes. The Unifiner will serve as a pretreater for the Platformer.

Product from the unit is expected to have a leaded octane in excess of 96. Universal Oil Products Co. licensed, designed, and engineered the unit.

•

Stone & Webster Engineering Corp. is expanding its foreign operations with the formation of a Netherlands subsidiary and further integration of its British, French, and Australian subsidiaries.

The Dutch subsidiary will be known as Stone & Webster Engineering N.V. Headquarters will be in The Hague.

In Britain, E. B. Badger & Sons, Ltd., which was merged with Stone & Webster in 1951, becomes Stone & Webster Engineering, Ltd. The French subsidiary, formerly known as Etablissements Badger, S.A., now becomes Stone & Webster, S.A. In Australia, the company known as E. B. Badger & Sons Pty., Ltd. now becomes known as Stone & Webster Pty., Ltd.

•

National average octane ratings of premium and regular-grade gasoline in July were unchanged from June, according to the latest Ethyl Corp. survey. Premium averaged 98.5 octane numbers, and regular 91.2. Both averages were 0.3 octane numbers higher than they were for July, 1957.

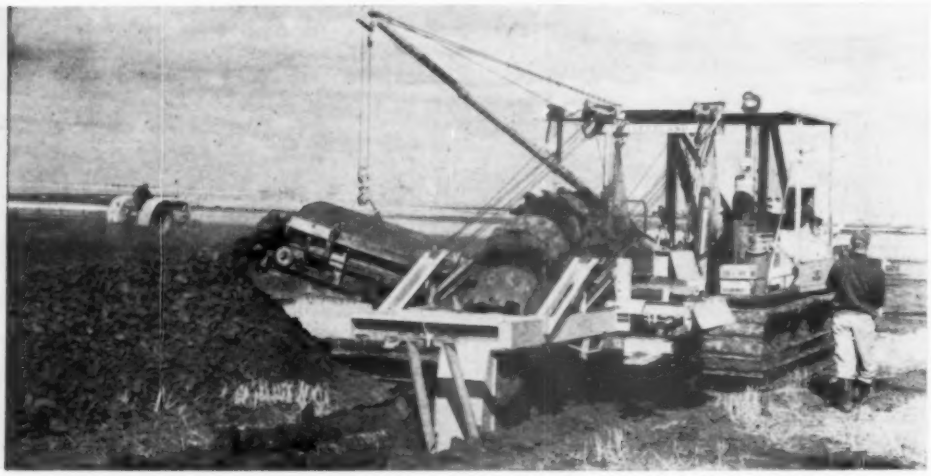
OLD

In '08 it was a matter of men and horses.

DITCHING fifty years ago meant horses with plows and men—plenty of them—with picks and shovels.

NEW

Today horses are gone; men direct machines.



DITCHING MACHINES have made life easier for pipeline hands while speeding up laying.

50 Years in Pipelining—There've Been

Pipeline construction has come a long way in 50 years, as everyone knows. But take a look at the pictures on these pages to see just how far "a long way" really is.

Back in 1906, a couple of young Gulf Coast refiners, The Texas Co. and Gulf Oil Corp., cast hungry glances toward the newly discovered Glenn Pool, near Tulsa, in the Indian Territory (Oklahoma didn't become a state until 1907).

The Glenn Pool crude, the companies realized, was far richer in gasoline and kerosine fractions than the crudes available at the Gulf. And in those days, what with the automobile just coming into its own and kerosine lamps still the vogue, demand for these products was soaring (remember?)

The answer: Pipe the crude about 415 mi. from Glenn Pool to the Gulf Coast refineries at Port Arthur.

Texaco, now observing the 50th anniversary of completion of its Glenn Pool-to-Port Arthur line, last week told of the "great pipeline race."

Back then it took about a year and a half to build The Texas Co.'s 473-mi., 8-in. crude line from the Tulsa area to the Gulf Coast.

Texaco began the line in late 1906, and finished it in early 1908.

Work on Gulf's line, which was to have a straighter route and fewer pump stations, was begun at the same time, but was completed just before the end of 1907.

By contrast, the 512-mi. Texaco-operated Four Corners-to-Jal, N.M., line, was recently completed in about nine months. And the new line, twice the diameter of the Glenn Pool-Port Arthur line, had to be laid in some stretches of mighty rough terrain.

Considering the equipment available, however, the old Glenn Pool-to-Port Arthur line was laid at breakneck speed. Pipe-stringing, for instance, was of the horse-and-wagon variety in those days.

There was no such thing as a well-equipped, 20-ton tractor-trailer hauling a dozen lengths of pipe and tucking

PIPE STRINGING was carried out by the wagon-load—2 or 3 lengths at a time.

TRACTOR-TRAILERS now haul pipe in a fraction of the time spent by horse and wagon.

Some Changes Made

them gently along ditchside. Instead, old Dobbin drew his wagon-load—two or three lengths—slowly along the right of way; and the hand-unloading of the pipe was often accompanied by considerable bone-crunching.

In those days ditchers were men—not machines.

Says Texaco: "Thousands of men with pick and shovels were involved" in digging the 473-mi. trench. The ditchers went to work after the ground was broken by some of the "innumerable horses and plows" along the right of way.

And there was only one way to do all the other jobs in building the line—by hand.

Lowering-in, backfilling, right-of-way cleanup, all these were handled without the help of machines. (Those were the days when men were men and horsepower was horse power.)

But one thing hasn't changed: It cost a lot of money to build a pipeline even in the good old days.

The Glenn Pool-Port Arthur line cost Texaco $5,641,000—just about equal to the company's total capitalization at the time.

Today's pipeline projects of comparable size, because of the inflated dollar, cost considerably more. But no company today has to risk as much of its total capital as Texaco did in 1906.

What's New
IN TRANSPORTATION

Pipeline corrosion is now a $600-million-a-year problem, according to a report just issued by the National Bureau of Standards. The new report, based on 45 years of research on underground corrosion, says that combined expenditures for protective measures and pipe replacement are at an all-time high.

•

Tidewater Gas Co. plans to bring natural gas to five cities in eastern North Carolina early next year.

Tidewater Gas (no relation to Tidewater Oil Co.) will start work in early fall on a $3.5-million expansion program to bring natural gas from the Transcontinental Gas Pipe Line Corp. main line in western North Carolina to Wilmington, Fayetteville, New Bern, Greenville, and Washington.

C. N. Flagg & Co. will build the line for Tidewater.

•

Pacific Northwest Pipeline Corp.'s proposed $5.5-million Wyoming expansion program has just been given temporary authorization by the Federal Power Commission.

Pacific Northwest will build about 50 mi. of 30-in. line in Lincoln and Sublette Counties.

The line will enable Pacific Northwest to take natural gas from independent producers in the Big Piney and Tip Top-Hogsback fields.

•

Cosden Petroleum Corp. will link the Moore field area of Howard County, Tex., with its crude system. Cosden has bought the Moore field gathering system of Scurlock Oil Co., and will take about 2,000 b/d from 43 leases in the field.

•

Southern Union Gas Co. will link three more San Juan Basin gas fields with its main line to Albuquerque, Santa Fe, and Belen, N. M.

Southern Union has just begun construction of a 12-in., 12½-mi. line that will take gas from the Ballard Pictured Cliffs, Dogie Canyon, and Jicarilla fields to the company's existing system in San Juan County.

The line is expected to be completed Sept. 1.

Foutz & Bursum Construction Co., of Farmington, N. M., is the contractor.

DEPT/International

Will Morocco Draw Next Oil Play?

Within a week of signing its joint-venture oil agreement with the Italians, the Morocco government announced that other companies are dickering for oil rights under its new 50-50 oil law (PW—Aug.1'58,p71).

The announcement by Premier Ahmed Balafrej last week did not identify the companies, though an earlier report from Rabat had indicated that discussions are under way with U. S. firms.

The major innovation in the new law is that it establishes 50-50 profit-sharing for the first time in Morocco, with the government's 50% of profits to be derived from a 12½% royalty plus taxes.

The new oil law—like Iran's—spells out only general terms for new oil agreements.

This is not a new element for Morocco, but the terms of participation apparently closely follow the pattern outlined by Iran's petroleum act last year.

As he did in Iran, Italy's Enrico Mattei jumped the gun, concluding a 50% partnership oil pact with the government for Agip Mineraria even before Morocco's new law was published last week.

The agreement, signed after months of negotiations, may indicate that Morocco, like Iran, will give preference to bids that include a 50% partnership for the government. It is worth noting in this connection that Iran has made no oil grants without this 50% participation to date.

Companies accepting government participation are accorded special advantages under the new Morocco law: They will be exempt from annual acreage taxes, and from the maximum acreage limitations.

The new law divides Morocco into three oil zones:

Zone I: the North Atlas Mountain area, containing small sedimentary basins of the European type, where acreage grants will reportedly be limited to 20,000 sq. km. (7,720 sq. mi.)

Zone II: the South Atlas Mountain area, with large basins of the Sahara type, where the maximum acreage is reported as 40,000 sq. km. (15,440 sq. mi.)

Zone III: offshore, along the Atlantic coast.

Reports of the law are still spotty and unofficial, but some of its details have become known.

- Exploration permits will be issued for four-year periods, renewable with reduction of acreage. The maximum exploration period is reported as 12 to 15 years; the final three of these are apparently permissible only under special conditions, but this is not yet clear. Also conspicuously lacking so far is word of just what the development term will be.
- An annual acreage tax will range from 1,000 to 5,000 Moroccan francs (about $2.40 to $12) per sq. km., depending on the zone, and increasing with each exploration period.
- Minimum exploration investment would be $4½-million for the first four years and $1-million annually thereafter.
- Percentage depletion is provided if the money is reinvested in Morocco. The amount is the same as in the U. S.—27½% of production income, but not more than 50% of net income.
- Producing companies reportedly will be permitted to export freely only 50% of their output after meeting Moroccan demand. There was no indication last week whether this applies specifically only to companies in which the government holds 50% interest.

The Moroccan-Italian agreement, which fits into the framework of the new law, provides refining rights, which presumably also will be included in any further agreements.

Under the pact signed officially on July 26, a joint Moroccan-Italian company called Somip (Societa Anonima Marocchina-Italiana dei Petroli) has been formed, with Agip and the Moroccan government each putting up 50% of the initial capital of 60-million francs (about $144,000).

Somip has been granted the right to explore, develop, and refine crude on an 11,583-sq. mi. concession around Cabo Jubi, in Morocco's southern province of Tarfaya, near the Spanish Sahara border. About 10,000 sq. mi. of this is onshore, and the rest offshore on the Atlantic coast. Thus, the concession is apparently in both Zones II and III.

As in Iran, Agip will put up all the risk capital, with a maximum exploration commitment reported from Italy as $30-million.

Development costs will be shared equally with Morocco after commercial production is established. At that time, 50% of Agip's exploration expenditures become subject to reimbursement from oil income at the rate of 10¢ per bbl. of crude produced.

Morocco, it is reported, has reserved the right to sell half of the oil production to any buyer for hard currencies.

The agreement provides for construction of a 20,000 b/d to 25,000 b/d refinery by Somip, but it is not clear yet whether this is a mandatory commitment or dependent on volume of production.

At present there is only one very small refinery in Morocco. It is owned by Soc. Cherifienne des Petrolees, which is also the only company now exploring in Morocco. Owned largely by the French and Moroccan governments, it has carried on extensive exploration for some 25 years, with only very small production, which last year totaled about 1,500 b/d.

Israel Eyes Export Market

Israel is reviving efforts to get a 32-in. export pipeline built to the Mediterranean from the Gulf of Aqaba, now that it has completed its own, smaller link with the Haifa refinery.

A representative of Delek, a government oil marketing company, headed for Europe last week in an attempt to kindle interest among French and Swiss oil groups in building the major pipeline to Haifa from the port of Elath in the Gulf of Aqaba.

The Israelis like to think of the proposed $60-million crude line as providing an alternate to the Suez Canal as a route for oil shipments—although, under the Arab boycott, no oil from Arab states may go to Israel.

The French government had at one time considered backing the project (PW—Apr.19'57,p64). But it was shelved temporarily last year while Israel proceeded with a series of smaller pipeline links toward the Mediterranean for internal demand. The first was an 8-in. line from Elath to Beersheba. This was connected later with a 16-in. line to Ashdod Yam, on the Mediteranean coast. And now the final link, another 16-in. line along the coast to the Haifa refinery,

is about ready to go into operation.

At the same time, the government is reportedly looking for suitable private partners for possible purchase of the 80,000 b/d Haifa refinery, owned jointly by British Petroleum and Shell.

According to sources in Tel Aviv, "suitable" partners would be those who (1) would be prepared to make the necessary investment; (2) have the technical knowhow to operate the plant; (3) have enough influence to secure a steady flow of crude from Western-owned sources to permit utilizing the plant's full capacity. The refinery is currently processing about 24,000 b/d for local consumption.

To date, however, there has been no official indication that BP and Shell are interested in selling the Haifa plant. Its future was left undecided last year when the two companies announced that they would sell out their joint local marketing operation because government encroachment made it a commercially unattractive proposition (PW—Jul.26 '57,p14).

Since then, BP has continued to operate the plant under a series of six-month agreements with the Israeli government. Each agreement has been subject to renegotiation of terms under which crude is processed for marketers in Israel—Delek, the Sonneborn interests of New York, which bought out Socony's marketing interests, and the Wolfson interests of Britain, which this year bought out Shell-BP's marketing.

BP says the current agreement extends through Sept. 30, and that recent talks with the Israelis concern the arrangements to be made after that date. It has given no indication whether the "arrangements" involve anything more than renegotiated processing prices.

Venezuela Probe Clears Grants

CARACAS—An official government probe has cleared the slate of charges of irregularities in granting of new concessions in 1956-57 under the Perez Jimenez regime (PW—May 23'58,p44).

Minister of Mines & Hydrocarbons Dr. Carlos Perez de la Cova said in a brief press conference statement last week: "All concession applications submitted in 1956 and 1957 have been studied and found in accordance with legal dispositions.

"The companies complied with the Commercial Code and with the Law of Hydrocarbons."

Any evidence of legal violations could have invalidated lease titles. The Minister had ordered the audit of concession negotiations in April, following newspaper demands for a probe when the new government took over after the January revolution.

The study, carried out by a public accounting firm, covered official negotiations from the time bids were submitted to the Ministry to the time leases were formally awarded on a total of 2-million acres, which drew in bonuses of $686-million.

The clean bill of health thus clears any cloud over the title to Lake Maracaibo Lot Northwest V-575, which had attracted the most newspaper attention. This was awarded in 1956 to Venezuelan Leaseholds and transferred to the San Jacinto Petroleum group in a stock trade. Last week the actual exchange of stock was started, at the rate of 25 Leasehold shares plus 75¢ for one San Jacinto share.

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What's New / AROUND THE WORLD

Oil production in key Middle East producing states jumped nearly 1-million b/d during the first half of 1958 compared to the same period in 1957, to almost 4-million b/d.

Kuwait's six-month average, nearly 1.4-million b/d, showed the greatest increase—a 335,000 b/d jump. Iraq's average was boosted 326,000 b/d to 659,800 b/d.

Iran picked up some 120,000 b/d, for a six-month average of 805,200 b/d. It was followed by Saudi Arabia with a 97,400 b/d increase, to 991,300 b/d, and Qatar, which rose 45,000 b/d to 171,600 b/d.

Production in June was marked by full restoration of Iraq's pre-Suez producing rate. Together with increases in Iran and Qatar, this pushed the month's total to 4,036,500 b/d. This was a 178,500 b/d gain over June, 1957, despite a 213,000 b/d cut in Saudi Arabia.

Here are the current totals, in 000 b/d:

	June '58	June '57	May '58
Kuwait	1,383.2	1,380.6	1,367.3
S. Arabia	951.3	1,164.3	979.5
Iran	789.0	731.0	744.0
Iraq	752.0	435.1	704.3
Qatar	161.0	147.0	173.8
Total	4,036.5	3,858.0	3,968.9
6-mo. avg.	3,994.4	3,072.0	

•

CUBA—Refining capacity, which already exceeds Cuban demand, will be boosted another 5,000 b/d with construction of a new plant at Cienfuegos, on Cuba's south coast, in Las Villas province.

The contract to build the $3½-million plant has been awarded to The Refinery Engineering Co., Tulsa, by Transporte Reca S.A., a Cuban refiner that now has a 2,000 b/d plant inland at Cabaiguan, in the same province. Work will start on the new refinery by October, according to the company's announcement.

The new plant will increase Cuba's refining capacity to almost 90,000 b/d, well above domestic demand, which is now running at around 70,000 b/d. The capacity buildup has been achieved over the past year or so with completion of several new refineries by major companies: a 27,000 b/d Shell plant at Havana; a 35,000 b/d Esso plant at Belot; and a 20,000 b/d Texaco plant at Santiago de Cuba. The refineries operate almost entirely on imported crude, since Cuba's oil production is still limited to a scant 1,000-1,200 b/d.

•

VENEZUELA—Known reserves in Lake Maracaibo Block 4 have been increased by the fifth exploratory well completed by Signal Oil & Gas Co., operator of the midlake block for its joint account with Hancock Oil Co., Pure Oil Co., and Standard Oil Co. of Ohio.

Signal said the No. 6-X Centro flowed 40.7-gravity oil at the rate of 5,880 b/d through 203 ft. of perforations from the C-5 and C-6 Eocene zones.

The well has thus extended production 1¼ mi. to the southwest of the group's No. 4X. That well was completed as a 4,500 b/d producer in the C-4 zone, with a combined potential of some 17,000 b/d from a total of four Eocene sands.

The derrick is now being moved from No. 6X to the No. 4X area to drill No. 7 Centro to the C-2 zone as a development well.

•

JAMAICA—A plan to build Jamaica's first refinery—a 25,000 b/d plant—has been approved by the government.

The proposed plant would be built by Jamaica Oil & Chemical Co., Ltd., a new independent refining company incorporated in Jamaica and affiliated with undisclosed U.S. oil interests. It would be built in the Kingston area with initial capacity of 16,500 b/d.

•

GERMANY—The Middle East crisis underscores Europe's need to develop new alternate sources of oil supply, the West German association of producers and refiners said last week in Hamburg.

West Germany's refining capacity is expected to increase to some 800,000 b/d in the next few years, the association notes, and its heavy dependence on Middle East crude supplies was clearly demonstrated by the Suez crisis.

With the new turmoil in the Middle East, the association says, the European oil industry should make long-term plans to avoid transportation problems and to develop new sources of crude in Europe itself and in Africa.

•

VENEZUELA—A second company—Shell—has surrendered concessions along the Colombian border that it was required to take in 1956 along with development grants elsewhere.

Shell did not drill the new acreage, which covered 49,420 acres in the state of Tachira. It had paid $971,000 in bonuses for the "obligatory" exploration rights. Creole was the first to give up some of its own border rights (PW—Jul.11'58,p72).

At the same time, Shell also surrendered all the rest of its older acreage in Tachira—some 128,734 acres of development rights, on which it had drilled three dry holes in 1939 and 1955.

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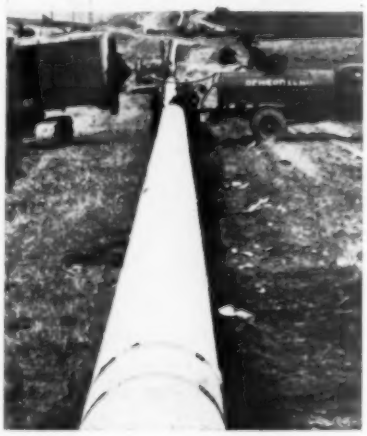
INDONESIA—Oil revenues are apparently set to be split equally between the central government on Java and oil-rich Sumatra, thus re-



For Moscow's Gas . . .

The Russians say they have installed a new tele-control system in the big Stavropol natural gas fields, from which gas flows 808 mi. to Moscow through this 28-in. pipeline.

One central point in the new automatic field system controls more than 100 positions spread out over some 22 mi., according to "Moscow News," a Soviet newspaper.

The 28-in. pipeline to Moscow, shown here while still under construction, went into operation last year. It is the second outlet to Moscow, much larger than a prewar Stavropol-Moscow gas line. It is said to have five major pump stations.

solving a primary cause of the recent rebellion.

This is indicated by an announcement by the Finance Minister last week that half of the government's proceeds from exports will be allocated to the exporting area, retroactive to July 1. Up to this point, only minor shares of the revenues have been turned over to Sumatra and the other outlying islands that account for most of Indonesia's exports of oil and other products.

•

AUSTRALIA—For the first time, Australians are using gasoline at an annual rate of more than 1-billion Imperial gallons.

This estimate, equivalent to 28½-million bbl., is based on first-quarter demand, which hit almost 255-million Imperial gallons, a 7% rise over the same period last year.

Domestic demand for all oils during the first quarter also increased 7%, to some 14-million bbl.

Imports of crude and products were stepped up 14% over last year's quarterly average, to about 20.3-million bbl., most of it crude.

At the same time, product exports jumped to some 2.8-million bbl., up 75% compared with last year's quarterly average.

Main export markets were New Zealand and Aden, followed by Singapore, India, and Ceylon.

•

VENEZUELA—Construction schedules on $21-million worth of projects will be advanced by Creole Petroleum Corp. to help combat unemployment in many parts of Venezuela.

The step was announced by Creole last week as an expression of "confidence in Venezuela's economy" and future development.

The Jersey Standard affiliate produces more oil than any other company in Venezuela. Its gross plant investment in the country is $1½-billion.

•

PARAGUAY—A Jersey Standard affiliate has proposed building Paraguay's first refinery as part of a $3-million refining and transport program to meet the country's oil requirements.

The proposal, as submitted to the government by Esso Standard of Paraguay, calls for a 3,000 b/d refinery at Asuncion plus river craft to transport crude oil and refined products.

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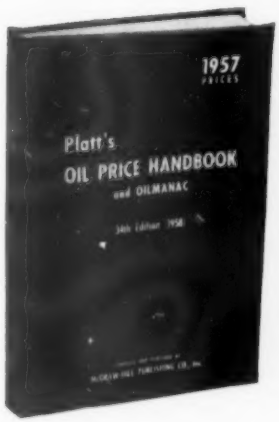

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NEW LOADING RACK built by Shell Brazil can handle 20 trucks at once. The company wanted to be ready with a . . .

Big Terminal to Serve Growing Market

Shell Brazil Ltd.'s new Sao Paulo products terminal—one of South America's largest—is getting set for a booming petroleum demand. It's smack in the middle of the country's largest industrial concentration.

The station is part of Shell's Ipiranga Depot, which is a terminal point of the pipeline system running into Sao Paulo city from the main refinery near by.

Most of the products moving through the new terminal will be earmarked for delivery within the industrial boundaries of Sao Paulo state. The area's market potential is expected to grow at the rate of about 8% a year, according to Shell.

The modern-design loading station, now in its third month of operation, handles about 800,000 gal. of products daily. This volume is expected to grow steadily, say Shell officials.

Equipment has been installed to handle 22 different products, but this could be increased to 24. Bulk of the products now distributed includes all grades of gasoline, kerosine, diesel fuel, some solvents, and fuel oils.

The station layout somewhat resembles a wheel, with the office as the hub, and the truck-loading bays as spokes. Traffic moves in a counter-clockwise direction to enter and leave the 20-bay rack.

A typical step-by-step loading might be:

(1) Incoming driver parks in an empty filling bay.

(2) Driver gives cashier a customer-signed invoice and payment from last delivery.

(3) Cashier gives driver a certified copy of previous invoice, which is later presented to Shell by the transporter for payment.

(4) Dispatcher initials old invoice and gives driver next delivery documents. The copy of these forms is signed by the driver, then passed on to cashier by dispatcher.

(5) Driver returns to truck, showing documents to filler-operator, who handles loading at bay.

(6) The full truck leaves, giving traffic controller (at exit gate) a copy of filling order.

The terminal can handle up to 500 trucks in an eight-hour shift.

Of the 20 filling bays, 10 are for light oils, 10 for heavy oils. It is possible to fill four trucks with the same product at one time while the other 16 are being filled with other products.

The station's size and design, says Shell, allow flexibility for expanded delivery schedules and faster operations, if need be.

As at most terminals, there are peak loading hours. Shell feels that eventually it may have to speed up handling of customer receipts, in order to continue to handle the peak loading periods efficiently. For the time being, however, there is no problem.

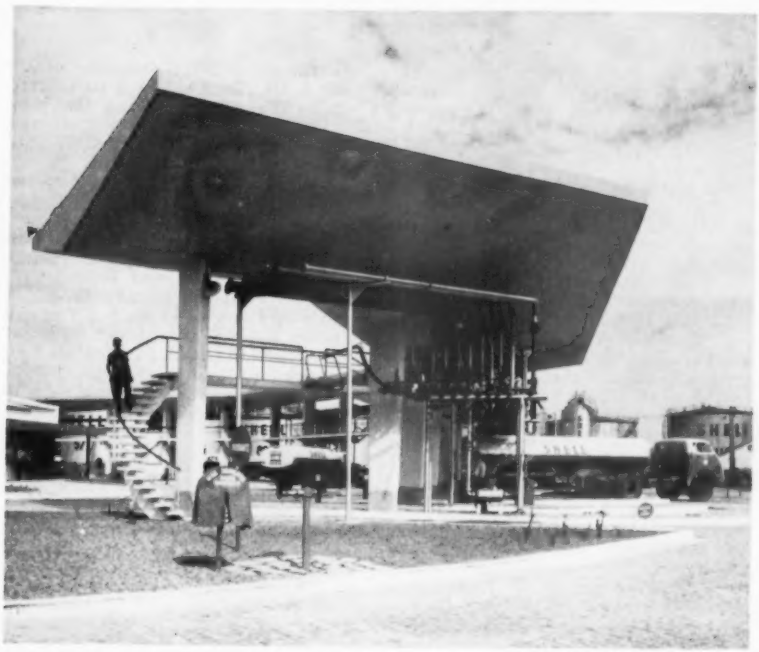
The possibility of installing pneumatic tubes between the filling bays and the dispatching office is now being studied. If the tubes are installed, says Shell, the station's radial-type design, will simplify the installation.

The typical truck handled at the rack is a 4,000-to 5,000-gal. semitrailer. Any truck under 66 ft. that is filled through a manhole can be accommodated, however.

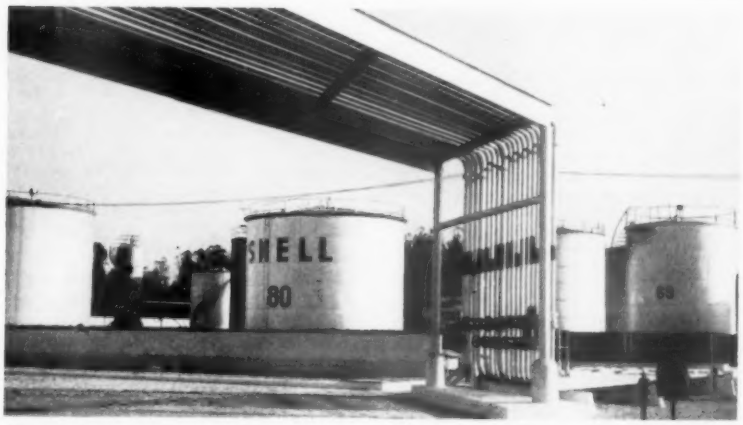
All of the 1¼ mi. of pipework is overhead, installed in such a way that it can be easily modified.

There's a bit of the "old-fashioned" in the modern terminal—simple hose-type filling arms. Most companies, including Shell, have abandoned this type of arm in favor of more modern ones. Shell reverted to the flexible hoses at this station "to simplify operations and to cut installation costs."

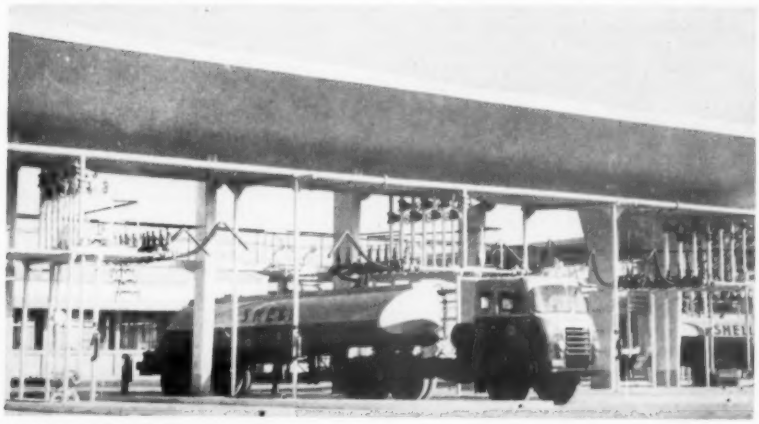
The hose-arm can be used with a simplified type of hose coupling. In effect, a bare-ended piece of hose can be coupled to the pipeline carrying the desired product. After filling, a quick-acting valve is closed and the hose drained into the tank.



FOOTBRIDGE leads to all bays. Overhead pipes (foreground) may be extended.



PIPEWORK, built overhead for easy upkeep, carries up to 22 different products.



TRUCK LOADING is coordinated from sound-conditioned office (background).

What's New
IN MARKETING

German motorists will soon be seeing a new version of the credit card: a punched key, containing the car's license plate number.

The plastic key will be issued by a new company, Tankring e. V., of Munich. One side of the key will have the car's license plate number engraved in letters; on the other side the number will be in the form of a punched-hole combination.

After checking a car's license against the number on the key, a station attendant inserts the key in a special cash register. The register produces a receipt in triplicate—showing date, amount paid, and car number. Copies of the receipt go to the customer, to the station, and to Tankring, which bills the customer at the end of the month.

It's impossible to alter the perforations on the "tank credit key" in the hope that somebody else will get billed, according to the inventor, because the computer at Tankring will spot the alteration without fail.

•

Sinclair Oil & Gas Co. is launching an extensive LP-gas advertising campaign for distributors, to build brand identification for its new trade name, "Truflame." The company is a wholly owned subsidiary of Sinclair Oil Corp.

Sinclair will aid distributors in newspaper, radio, direct mail, and billboard ads stressing the importance of the local distributor.

"We decided to start this comprehensive distributor advertising program," comments a sales official, "because of the growing demand among consumers for brand identification."

•

The Texas Co. has its new Lockport (Ill.) sales terminal in full operation. The terminal will service metropolitan Chicago and nearby Joliet with tank truck deliveries. Facilities include storage for 180,000 gal. of lubes, a warehouse-office building, and truck loading racks.

•

British American Oil Co. is expanding its marketing operations to the Yukon.

Yukon Shamrock Distributors, of Whitehorse, have been appointed exclusive agents for distribution of B-A products. An associate company, Alaska Yukon Refiners, will provide facilities for transportation and storage.

DEPT / Personals

LANGBOURNE M. WILLIAMS, chairman and president of Freeport Sulphur Co., New York, has been elected a director of The Texas Co., New York. Williams has been president of Freeport since 1933, and chairman since 1957. He is also a director of B. F. Goodrich Co., Akron, Ohio, and a member of the business advisory council for the Department of Commerce.

L. F. Hills

L. M. Williams

LISTON F. HILLS will become vice-president and chief engineer of Aramco Overseas Co., subsidiary of Arabian American Oil Co. on Oct. 1, succeeding the retiring **Ernest K. Schulze.** Hills will continue to make his headquarters in The Hague, where he has been serving as assistant chief engineer.

A. H. ROWAN, chairman of Rowan Oil Co., Fort Worth, was elected a director of Texas Pacific Coal & Oil Co., Tulsa refining and marketing sets were acquired by Texas Pacific on July 1.

R. PAUL HENRY, financial vice-president of Sunray Mid-Continent Oil Co., Tulsa, has also been named treasurer of the company. Henry joined the organization in 1949 as tax counsel, and in 1954, he was elected treasurer of D-X Sunray Oil Co., Tulsa refining and marketing subsidiary of Sunray Mid-Continent. In 1955, he was elected financial vice-president of the subsidiary. Earlier this year, he was elected financial vice-president and a director of the parent.

LLOYD D. THORNTON is landman at the new district office opened by Petroleum, Inc., in Dallas, and **William T. Stokes** is district geologist. The office will direct activities in southeastern New Mexico and all of Texas except the Panhandle and East Texas.

H. J. GEIGER, Esso Standard Oil Co., New Orleans, is president of the newly formed Louisiana Petroleum Institute, Baton Rouge, a consolidation of the Louisiana Oil Information Committee and Petroleum Industries Committee.

M. H. DUBROW was promoted to the new position of assistant manager of Continental Oil Co.'s headquarters production department. Dubrow, formerly chief engineer in Conoco's production department, will continue to make his headquarters in Houston. **Glenn C. Sawvel,** formerly assistant superintendent of Conoco's Oklahoma City production district, has been promoted to superintendent. He succeeds **D. W. Matthews,** who has become assistant division superintendent of the Kansas production division, in Wichita.

JAMES A. HICKEY has been named safety coordinator in the Dallas headquarters of Southern Union Gas Co. Hickey has been safety supervisor for Atlanta Gas Light Co. in Georgia since 1953.

JOHN D. ALBRIGHT has been named assistant chief petroleum engineer for Cities Service Oil Co.'s production division, in Bartlesville, Okla. Before transferring to Bartlesville in 1956 as special engineer, Albright served as production engineer, and then as district engineer, in Madison, Kan.

W. M. HORN, Gulf Oil Corp., Billings, has been elected president of the Montana Oil Scouts Assn.

MED SERIF was named editorial supervisor and general assistant to the director of the department of business research and education for Cities Service Petroleum, Inc., in New York. He was formerly editor of LP-Gas Magazine, also in New York.

NORMAN B. AVENELL has been appointed manager of Humble Oil & Refining Co.'s marine dapartment, in Houston, succeeding **Julian S. Burrows,** who is retiring. Avenell has been assistant manager of the department since 1953.

N. B. Avenell

D. K. Dressback

D. K. DRESSBACK was named controller of Tekoil Corp., Dallas. He will head accounting operations at Tekoil's offices in Oklahoma City.

FOUR NEW DIRECTORS were elected to the board of Yucca Mining & Petroleum, Inc., at its recent meeting at Grand Junction, Colo. They are: **Sal J. Russo,** vice-president of Cosmopolitan National Banks, Chicago; **John F. Brady,** vice-president of American Milling Corp., New Mexico; **Roland Schaefer,** Chicago and Miami, president of Lincoln-Devon Development Corp. and of Bowling Corp. of America; and **William W. Lynn, Jr.,** a member of the New Mexico Geological Society.

FRED NANTKER has been promoted to landman of Shell Oil Co.'s Farmington (N. M.) division office. **H. J. Geerlings** has been transferred from Ventura, Calif. to Durango, Colo., to replace Nantker as district landman there.

W. J. MURPHY has been named Southern California representative of the public relations department for Standard Oil Co. of California, with offices in Los Angeles. He replaces **H. H. Roberts,** who recently retired. Murphy joined California Standard in 1937 in the Los Angeles office, and was named staff assistant to Roberts in 1940. Prior to his new appointment, he served as a field representative covering various parts of Southern California.

W. J. Murphy

E. W. Campbell

E. W. CAMPBELL has been promoted to coordinator of direct sales for the domestic marketing department of Gulf Oil Corp., in Pittsburgh. Campbell succeeds **G. L. Benjamin,** who was recently named manager of refinery sales, with offices in New York. **R. W. Flynn,** formerly supervisor of direct sales training, succeeds Campbell as manager of industry and special accounts. He will continue to make his headquarters in Pittsburgh.

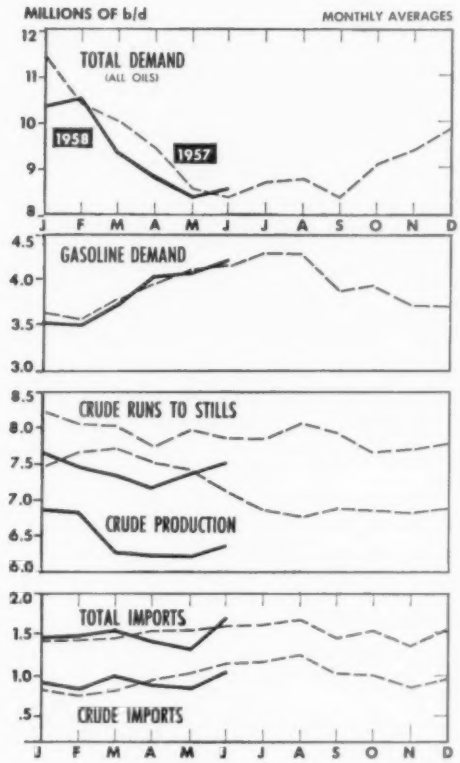
FOUR DIVISION VICE-PRESIDENTS of the American Petroleum Institute have been appointed ex-officio members of API's new committee on public affairs. The new appointees are: **D. L. Connelly,** Warren Petroleum Corp., Houston, API vice-president for production; **H. W. Ferguson,** Humble Oil & Refining Co., Houston, API vice-president for refining; **D. T. Colley,** Atlantic Refining Co., Philadelphia, API vice-president for marketing; and **C. E. Spahr,** Standard Oil Co. (Ohio), Cleveland, vice-president for transportation.

ROBERT E. ANDERSON has been named general representative for Indonesia of Standard-Vacuum Oil Co., succeeding **E. W. Berlin,** who is returning to Stanvac's headquarters in White Plains, N. Y., for reassignment. Anderson has been assistant general representative at Djakarta, Indonesia, since last September.

WILLIAM RUTHERFORD has been appointed to the newly created post of superintendent of pipe lines for the provincial government of Alberta, Canada. He was formerly oil and gas processing engineer for Dutton-Williams Bros., Ltd., Calgary.

PETROLEUM WEEK'S

Fingertip Figures



TOTAL DEMAND

Latest 4-week average	8.613
Year ago	8.684

GASOLINE DEMAND

Latest 4-week average	4.294
Year ago	4.274

RUNS TO STILLS

Latest week	7.727
Previous week	7.517
Year ago	7.936

CRUDE PRODUCTION

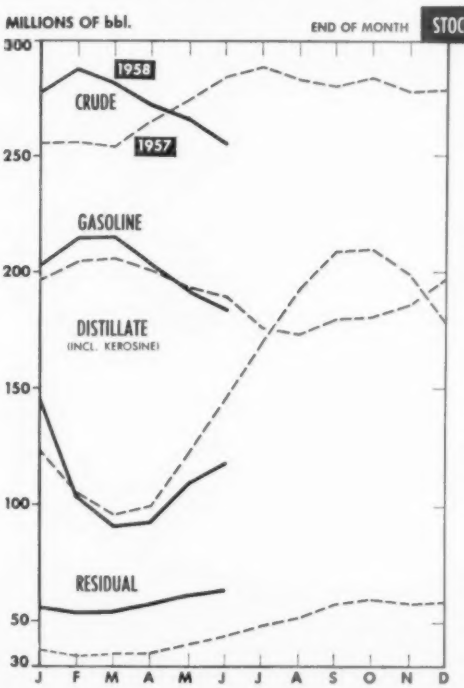
Latest week	6.545
Previous week	6.536
Year ago	6.843

TOTAL IMPORTS

Latest week	1.654
Previous week	1.294
Year ago	.546

CRUDE IMPORTS

Latest week	1.157
Previous week	.747
Year ago	.242



STOCKS: CRUDE

Week ended 7-26	248.8
Previous week	251.7
Year ago	285.2

GASOLINE

Latest week	178.7
Previous week	178.8
Year ago	176.4

DISTILLATES

Latest week	146.3
Previous week	140.9
Year ago	169.6

RESIDUAL

Latest week	66.9
Previous week	66.5
Year ago	48.9

Crude oil production in the United States is approaching 1957 levels.

In fact, there is a strong possibility that production may exceed the daily average rate for August, 1957, by the end of this month. A year ago, crude output averaged 6,784,000 b/d. Production at the end of July, 1958, approximated 6,400,000 b/d. To this must be added the allowable increases for August in four states.

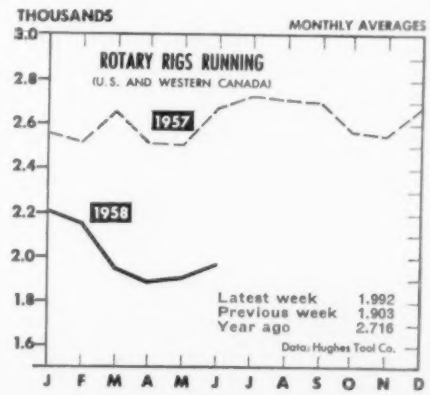
These increases were: Texas, 327,388 b/d; Louisiana, 42,064 b/d; Kansas, 20,000 b/d, and New Mexico, 1,287 b/d, for a total gain of 390,739 b/d. When this is added to the 6,400,000 b/d average, the total is 7,790,739 b/d. However, allowances must be made for underproduction and fluctuations in production, which will trim the total somewhat.

The flow of crude oil has been sneaking up on the 1957 rate despite the fact that allowables in some of the major oil-producing states are below those of a year ago.

The largest, Texas, entered August with a producing-day schedule of 11 as against the 13 days permitted for the comparable year-ago month. Oklahoma, Louisiana, and Kansas also are below 1957 levels.

New Mexico's flow rate is considerably above that for August, 1957. But New Mexico actually must be considered in two parts—southeastern and northwestern. There has been little or no change in southeastern New Mexico, the largest producing region in that state. Therefore, all of the increase has been in the northwestern part, which shares in the rapidly expanding Four Corners area development.

The Four Corners area has been one of the chief reasons for the climb in production. In Utah, for example, production now averages 102,700 b/d as against the August, 1957, rate of 10,400 b/d.



The Market Trend

The Corner? Maybe It's Been Turned

The trading tempo is stepping up, and so are some of the prices. A faster pace is literally the truth with tankers. The sudden call for products stemming from the Mid-East tension caused some fleet owners to speed up their vessels.

This week, most Mid-Continent producers are upping their Group 3 propane prices from 4¢ to 5¢ a gal. The stock position seems to point to firm prices. Propane inventories fell 52-million gal. in the first half of this year. In the same period of 1957, stocks rose 117-million gal.

No. 2 fuel prices moved up 0.25¢ in the Gulf cargo market. A New York marketer bought two cargoes at 8.625¢ for August loading, the price up from 8.375¢ on earlier transactions.

In the Mid-Continent, diesel fuel prices are stiffening. Virtually all the railroads operating in the area will be paying 0.25¢ more for diesel all through August.

Kerosine and No. 2 fuel tank wagon prices generally advanced as much as 1¢ in many areas of the Midwest. The rise will probably bolster the Chicago market, which had been a little wavery.

Diesel and gas oil prices are much stronger in the Caribbean, too. The government has picked up substantial quantities of Navy Special fuel oil there in recent weeks. A world-wide increase in diesel bunkering prices is in the making.

And the general feeling is in the air that things are better. The rumor mills are grinding again—a good sign that a lot of new deals are being negotiated. You get the feeling that marketers have quit being scared.

Characteristic of better times, refiners are talking more freely about what's going on in the markets. Nothing makes a refiner clam up like a soft, spongy marketplace. This week, a Gulf Coast independent conceded that his company now can make ends meet at current price levels. He and others like him are talking better sales, stronger prices.

Maybe the corner has been turned.

The Biggest Buyer of All:

When the government enters the market, things start hopping. A New York charter broker reported 11 fixtures for the military last week. Two 40,000-tonners were fixed to pick up clean products in the Caribbean. Those two ships alone will move over 500,000 bbl. of gasoline out of the area.

New Alignment In the East?

The hot rumor along the East Coast is that a major marketer may get into a purchase-and-lease-back arrangement with an independent New York supplier. Some 20-odd barge and ocean terminals are said to be involved. The independent's large supply contract for Caribbean fuel oil—expiring in 1961—eventually may shift to the new major.

'Gas' Reports Vary Widely:

The most varied reports these days show up on gasoline. Natural gasoline in the Mid-Continent looks strong enough to rise. Avgas and avgas components have changed from weak to strong at the Gulf. In Chicago, motor fuel prices are slipping back 0.5¢ from their recent highs.

The Market Place AROUND THE WORLD

Prices compiled for PETROLEUM WEEK by Platt's OILGRAM Price Service and National Petroleum News, McGraw-Hill Publications

All Prices as of August 4

Bold face type indicates changes from previous week

KEY PRICES—REFINED PRODUCTS

(¢ per gal. except dollars per bbl. where $ is shown)

Western Hemisphere

U.S. Gulf Coast, cargoes
- **Gasoline, 98 oct prem** ..... **12.25-12.875↓**
- Gasoline, 92 oct reg 11-11.5
- **Kerosine** ..... **8.875↑-9.125↑**
- **Heating oil, No. 2** ..... **8.65↑-9**
- **Gas oil, 48-52 d.i.** ..... **8.875↑-9.5**
- Fuel oil, bunker "C" $2.25-2.40

Caribbean, cargoes
- Avgas, Grade 100/130 16
- Gasoline, 93 oct research prem 11.25
- Gasoline, 87 oct research reg 10.375
- Gasoline, 79 oct research 9.625
- Gasoline, 70-72 oct motor method 9.5
- Kerosine 8.875
- **Heating oil, No. 2** ..... **8.625↑**
- **Gas oil, 48-52 d.i.** ..... **8.875↑**
- Fuel oil, bunker "C" $2.25

New York Harbor, barges
- Kerosine 9.65-9.9
- Heating oil, No. 2 ..... 9.15-9.4
- Fuel oil, No. 6 ..... $2.57-2.65

Okla-Group 3, northern shpt, bulk
- Gasoline, 89 oct reg 12-12.75
- Kerosine 9.75-10
- Heating oil, No. 2 ..... 8.5-8.75
- Fuel oil, No. 6 ..... $1.30-1.45

Chicago, bulk
- Gasoline, 91 oct reg 12.5-13
- **Heating oil, No. 2** ..... **9.5-11.35↑**
- Fuel oil, No. 6 high sulfur 6.65-6.75

Los Angeles, rack
- **Gasoline, 88 oct reg** ..... **13↑-13.6**
- Diesel fuel, PS 200 ..... 10-11.25
- Light fuel, PS 300 ..... $3.05
- Heavy fuel, PS 400 ..... $2.50-2.70

Natural Gasoline, Grade 26-70
- FOB Group 3 ..... 4.5
- FOB Breckenridge, Tex 4

LP-Gas
- Propane, Oklahoma (Group 3) 4-5

Pennsylvania Lubes
- Bright stock, 25 p.t. 22
- 200 vis. neutral, 25 p.t. 21

Mid-Continent Lubes, Tulsa basis
- Bright stock, solvent 95 v. i. 23-24
- Neutral, solvent, 200-210 vis 19.5-20.5

Gulf Coast Lubes
- Bright stock, solvent, 95 v. i. 24
- Neutral, solvent, 200 vis 20.5

Eastern Hemisphere

Singapore (Pulau Bukom), cargoes
- Avgas, grade 100/130 ..... 17.25
- Gasoline, 79 oct research 10.375
- Kerosine 10.125
- Gas oil, 48 d. i. minimum 10

KEY PRICES—CRUDE OIL

(2¢ differential per deg. of grav. applies except as noted)

Western Hemisphere

United States (at the well)
- Mid-Continent, 36.0-36.9 ..... 2.83-3.07
- North Dakota, 36.0-36.9 ..... 3.07
- Texas:
  - Gulf Coast, low cold test, 26.0-26.9 ..... 3.50
  - Gulf Coast, Upper & Lower, 26.0-26.9 ..... 2.92-3.22
  - West Texas, sweet, 36.0-36.9 ..... 3.00-3.07
  - West Texas, N. M., inter., 36.0-36.9 ..... 3.00
  - West Texas, N. M., sour, 32.0-32.9 ..... 2.86
  - East Texas, flat 3.25
  - Mirando, 28.0-28.9 ..... 3.31
- Illinois Basin, flat 3.00
- Pennsylvania Grade, Bradford dist., flat 3.90
- California, Signal Hill, 21.0-21.9 ..... 2.63-2.73†
- North Louisiana-Arkansas, 36.0-36.9 ..... 2.82-3.02
- Wyoming, sweet, 36.0-36.9 ..... 2.90-3.00
- Wyoming, sour, 32.0-32.9 ..... 2.71

Canada (flat prices, at the well)
- Acheson-Stony Plain (Alta.) 2.61
- Leduc-Woodbend (Alta.) 2.67
- Redwater (Alta.) 2.56
- Daly (Man.) 2.39
- Smiley (Sask.) 2.33

Venezuela (Cargoes, FOB lifting port designated)
- Cumarebo, 48.0-48.9, Tucupido 3.75
- San Joaquin, 41.0-41.9, Puerto la Cruz 3.34
- Oficina, 35.0-35.9, Puerto la Cruz 3.05
- Tia Juana, Medium, 26.0-26.9, Amuay 2.55
- Bachaquero, flat, Las Piedras 2.03-2.08
- Tarra, 38.0-38.9, San Lorenzo 3.08
- Lagunillas Heavy, flat, Cardon 2.25

†*Differential per deg. of grav. varies.*

Eastern Hemisphere

Middle East, Persian Gulf (Cargoes, FOB lifting port)
- Arabia, 34.0-34.9, Ras Tanura 2.08
- Safaniya, 27.0-27.9, Ras Tanura 1.79
- Iran, 34.0-34.9, Bandar Mashur 2.04
- Iran, 34.0-34.9, Abadan 1.99
- Iraq, 35.0-35.9, Fao 1.98
- Kuwait, 31.0-31.9, Mina-al-Ahmadi 1.85
- Qatar, 41.0-41.9, Umm Said 2.23

Middle East, Eastern Mediterranean
- Arabian, 36.0-36.9, Sidon 2.49
- Iraq, 36.0-36.9, Tripoli, Banias 2.49

Far East, Cargoes, FOB Lutong, Sarawak
- Seria Light, 37-38 ..... 2.75

KEY TANKER RATES

(Last paid, per long ton, single voyage)

- **U.S. Gulf-New York, clean (USMC —12½%) $2.49↑**
- **U.S. Gulf-New York, dirty (USMC —15%) $2.42↑**
- **NWI-USNH, dirty ..... (USMC —45%) $1.48↓**
- NWI-UK/Cont., dirty ..... (Scale —57½%) 13/10
- Persian Gulf-UK/Cont., dirty ..... (Scale —35%) 36/1*
- Persian Gulf-USNH, dirty ..... (USMC —60%) $5.08

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R. E. SOUTHER has been named manager of foreign operations for the Baroid division of National Lead Co., Houston. He will be responsible for Baroid's export department, and for coordination with overseas affiliates. **B. O. Pixler,** formerly assistant manager of the well logging department, succeeds Souther as manager of that department, in Houston. **Wendell H. Russell** moves from Denver to Houston to replace Pixler. **S. E. Geffen** has been appointed area superintendent for the well logging department in Denver, succeeding Russell.

W. M. Creasy

R. E. Souther

MAJ. GEN. WILLIAM M. CREASY will join The Lummus Co., engineering and construction concern, as a vice-president after his retirement as chief chemical officer of the U. S. Army on Sept. 1. He will also serve as director of the Lummus engineering development center at Newark, N. J.

ARTHUR M. HAZELL, JR., is manager of petroleum equipment sales for the Electro-Motive division of General Motors Corp., in Houston. He succeeds **Harold P. Gustavson,** who has transferred to La Grange, Ill., as manager of electric utility sales. Hazell has been Electro-Motive's sales representative in Houston since 1955.

DR. CLARK D. GOODMAN has joined Schlumberger Well Surveying Corp. as a vice-president and director of research at the Ridgefield (Conn.) laboratories. Goodman, a nuclear physicist, has been associated with the Atomic Energy Commission, and was on the faculty of the Massachusetts Institute of Technology.

W. O. TIMBERLAKE and **MRS. J. R. MANN** were elected to the board of directors of Lucey Products Corp., Tulsa. Timberlake, Lucey's manager of machinery, was associated with Continental Supply Co. before joining Lucey in 1955. Mrs. Mann, secretary of the company, joined Lucey in 1957. She was formerly a director and secretary of Toklan Oil Corp., Houston.

JOSEPH E. HARKINS has been named territory manager for the south-central region, and **BRUCE E. DANE** territory manager for the mid-east region of the Alloy Tube division of Carpenter Steel Co. Harkins, formerly a sales representative for Thomas J. Lipton, Inc., will cover Arkansas, Louisiana, Mississippi, and some counties in northeast Texas. Dane's territory includes Tennessee, parts of Alabama, Georgia, Virginia, and Kentucky.

T. F. HUDGINS & ASSOCIATES, INC. has been appointed sales representative in the Houston area for Berry Hydraulics, division of Oliver Tyrone Corp., Pittsburgh. The company will provide sales and engineering representation for Berry pumps and motors, with emphasis on the gas transmission and chemical industries.

WADE FARRAR is manager of a recently completed oil well supply store for Continental-Emsco Co., Ltd., in Calgary. He was formerly store manager at Dawson Creek, B. C.

CHARLES R. BOOTZ has been named manager of the controls division for Black, Sivalls & Bryson, Inc., in Tulsa. He will be responsible for the division's manufacturing plant at Tulsa, and its national sales distribution. Bootz has been with BS&B almost two years, as manager of the company's nuclear project at Tulsa.

E. L. POTTS is superintendent of the new field pipe testing division of Brown Oil Tools, Inc., in Houston. Potts has been with Brown since 1949; prior to that, he was works manager for Halliburton Oil Well Cementing Co. in Duncan, Okla.

JOSEPH E. KLEUGER was appointed regional sales manager in Texas, Louisiana, Oklahoma, Arkansas, and parts of New Mexico for Panellit, Inc., manufacturer of automation and control equipment. Kleuger will supervise sales operations from Panellit's office in Houston.

J. E. Kleuger

M. A. Finuf

MELVIN A. FINUF was promoted to marketing assistant on the staff of the executive vice-president of J. B. Beaird Co., in Shreveport. **Gerald Pope,** formerly assistant general sales manager, replaces Finuf as general sales manager, in Shreveport.

DON COLLINS, president of the Tulsa NOMADS, has announced the appointment of the following men to the NOMADS committee for registering international delegates attending the International Petroleum Exposition in Tulsa, May 14-23, 1959. They are: **Hollis W. Hal-**

tom, Beckley, Haltom & Hickman, New York; **R. K. "Bob" Franklin**, Rolo Mfg. Co., Houston; **Ted W. Mayborn**, Dallas; and **Henry W. Pullman**, Baker Oil Tools, Inc., Los Angeles. Other Members, all from Tulsa, include: **Collins**, committee chairman, Republic Supply Co.; **K. O. Hoevel**, National Supply Co.; **George W. Davidson**, W. C. Norris; **H. M. Cooley**, Bethlehem Supply Co.; **R. C. Glover**, Baker Oil Tools, Inc.; and **Gilbert Swift**, Well Surveys, Inc. The committee will operate the NOMADS building on the IPE grounds, which will serve as headquarters for the international delegates.

CECIL C. SCOTT is the new president, and a director, of Diamond Oil Well Drilling Co., Midland (Tex.) manufacturer and distributor of diamond bits and coring equipment. Scott was formerly regional manager of Security Engineering Co., Dallas.

C. C. Scott

J. J. Ranna

JOSEPH J. RANNA has been promoted to manager of the New Orleans district office of A. M. Lockett & Co., sales subsidiary of Babcock & Wilcox Co., **G. Michael Baccich, Jr.**, replaces Ranna as assistant manager of the New Orleans district. He was formerly resident sales engineer at Baton Rouge.

PAUL GANIS is in charge of the new Grand Junction (Colo.) district office of Welex, Inc. He will handle the company's operations in western Colorado, eastern Utah, and the Four Corners area.

MARSHALL SPECTOR was appointed research chemist for M. W. Kellogg Co., subsidiary of Pullman, Inc., in Jersey City. Spector, formerly with General Electric Co., Schenectady, N. Y., will be engaged in exploratory research as a part of Kellogg's research and development program.

GUINN T. WILLIAMSON, formerly chief engineer for Tuloma Builders, Tulsa, has been elected vice-president of the company. Williamson will be in charge of engineering sales and process development for Tuloma's operations in the United States and Canada. **Dick R. Turner** has been named manager of engineering, and will be in charge of Tuloma's engineering, design, and material procurement for construction facilities and the pipe fabrication shop. He was formerly project manager of Ehrhart & Associates, San Francisco.

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P-8491, PETROLEUM WEEK
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Cited and Indicted

THE PETROLEUM INDUSTRY is to be complimented for the positive approach it now is taking to refute, in the public's mind, the charges of the federal government that 29 of its members conspired to fix crude oil and product prices (PW—Jun.6'58,p9).

At the time of the indictments, the companies were quick—and rightfully so—to issue denials of the charges. But at that time PETROLEUM WEEK considered this to be a negative approach, and stressed that what the industry needs is a positive approach to erase a "guilty" verdict from the public's mind.

THE POSITIVE APPROACH is beginning to be reflected in statements by top executives of some of the companies indicted.

After emphasizing that he had no quarrel with the federal antitrust laws, W. K. Whiteford, president of Gulf Oil Corp., said the "administration of these laws has shown a steadily enlarging tendency toward inconsistency, contradictions, and, to use a harsher but more accurate word, caprice . . . The main fact these developments spell out is that our federal government has NO unified, clearly understood policy as to where, when, or under what circumstances the antitrust laws shall be invoked. Unless this confusion is corrected, its ultimate effect will be adverse to investments and jobs of every shareholder and employee of any corporation large enough to justify the name. Meanwhile the oil industry has been, and remains, its particular and long-suffering victim."

From H. S. M. Burns, president of Shell Oil Co., came the statement that the government showed "failure to understand an important economic fact" when it charged that oil companies conspired to raise prices last year.

On this point, C. E. Reistle, Jr., executive vice-president of Humble Oil & Refining Co., which initiated the crude price increase with which the government is concerned, said:

"Humble's action on crude prices followed the closing of the Suez Canal and occurred for two reasons: First, Humble needed more oil than it could produce itself or buy at the level of prices then existing. Second, the increase was warranted because there had been no general increase in the price of crude oil since 1953; whereas since that date prices of goods and services, which are the major elements of cost in petroleum operations, increased substantially."

The price increases brought forth the necessary quantities of crude, for which some European countries have cited American oil companies —as against the indictments by the federal government.

WE WONDER IF THE GOVERNMENT still thinks a conspiracy exists, in view of the latest earnings statements of integrated companies, which show profits down substantially from last year. Reduced profits are, to say the least, an unusual result of a conspiracy.

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Three distinct mud removal services.

CPN
Emulsion block removal service.

VISQUEEZ
A new and superior method for shutting off water.

OILFRAC
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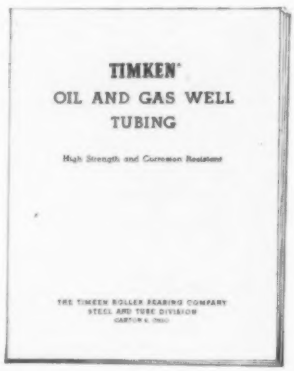

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